

# **Northern Territory Administrators Pension Scheme**

## **Actuarial Review as at 30 June 2019**

**August 2019**

# **Administrators Pension Scheme Triennial Actuarial Review as at 30 June 2019**

## **1. Introduction**

I have been asked to perform an actuarial review of the Administrators Pension Scheme as at 30 June 2019 by James Richards, the Commissioner of Superannuation, in his request of 17 July. The previous triennial review was conducted as at 30 June 2016 by me, and presented in a report dated 19 July 2016.

This report complies with relevant parts of Professional Standard 400 of the Institute of Actuaries of Australia.

## **2. Background**

The rules of the scheme are set out in the Administrators Pension Act 1981. The scheme provides pension benefits to retired administrators and reversionary pensions to their widow(er)s. The scheme pays pensions, with a two-thirds reversionary pension payable on the death of the member to a surviving spouse. Pensions are indexed to either judicial wages or CPI, depending on the actual circumstances. The scheme was closed to new members in 2006. No contributions are payable by members and benefits are met from the Consolidated Holding Account, so there is no fund of assets and no concerns about liquidity or the ability to meet benefit payments as they fall due. Death and invalidity benefits are self insured (and there are no remaining contributors in any case), as is appropriate.

Tax is not paid on either investment income or contributions, so all benefits come from an untaxed source.

The scheme has no Trustees and is administered by NT Department of Treasury and Finance.

## **3. Financial and membership data**

I have been provided with details of payments and in-force pensions at 30 June 2019 of members, as well as details of legislation and remuneration rulings over recent years.

There are currently 4 members – three former administrators and a reversionary spouse, all in receipt of pensions. There have been no deaths of members for several years. The four pension recipients were receiving annual pensions of \$345,000 in total at 30 June 2019. Pension payments have increased by 1.9% pa since 2016, significantly lower than assumed. Recent remuneration rulings have given low increases for the last three years, meaning salary-linked pensions have also only increased slowly.

I am satisfied that the data is suitable for valuation purposes.

#### 4. Valuation assumptions

##### Economic assumptions

In order to assess the values of future payments it is necessary to allow for the likely extent of future salary increases and also to discount future amounts back to a present date value. The July 2019 remuneration tribunal ruling increased relevant salaries by 2.0%, and I have assumed that this is the only increase to salary-linked pensions during 2019/20. Department of Treasury & Finance currently assumes salary growth of 2.5% for 2020/21 and 3.0% per annum thereafter, and CPI inflation of 1.5% for 2019/20, then 2% pa thereafter. These assumptions are broadly consistent with external forecasts and scheme experience. I am satisfied that these are reasonable assumptions for valuation purposes for this scheme and have adopted these assumptions at this valuation.

The scheme has no assets on which to earn investment returns, but liabilities could be funded by borrowing by NT Government. It is appropriate to use a discount rate which reflects the cost of borrowing when valuing unfunded liabilities for budget/funding purposes. The 10 year Commonwealth bond yield as at 30 June 2019 was about 1.3% pa, very low in historical terms, while NT's long term borrowing costs would be slightly higher currently. DTF assume a longer term discount rate of 3.5% pa.

NT Treasury's assumptions for long term discount rate and CPI inflation infer a real rate of return of 1.5% per annum. Real rates of return inferred by indexed Commonwealth bond yields are relatively stable over time, and while yields on indexed bonds are currently below 1% pa they have ranged broadly between 1% and 3% pa over the last decade. NT Treasury's 1.5% pa real-return assumption appears to be a reasonable best estimate assumption for the long term.

The wage-discount gap (i.e. the excess of discount rate over assumed salary growth) is 0.5% pa in the long term on Treasury's assumed basis. This is slightly lower than longer term average gaps of around 1-2%, and is a broadly reasonable best estimate assumption taking into account NT-specific features.

Taking into account all of the above, a long term discount rate of 3.5% pa appears to be a reasonable rate to use in conjunction with Treasury's wage and CPI inflation assumptions. Thus the triennial economic valuation basis I have adopted for this valuation is:

- 3.5% pa discount rate;
- 3.0% pa salary inflation rate, but with lower growth assumed for two years;
- 2.0% CPI inflation, but with lower inflation assumed for the first projection year.

For AASB119 financial reporting purposes, the requisite discount rate is the yield on long term government bonds. The yield on 10-year Commonwealth bonds is currently 1.32% pa ([www.rba.gov.au](http://www.rba.gov.au) 1/7/19), and I have used this discount rate with the above inflation assumptions in determining results for financial reporting purposes. Full financial reporting results are presented separately, and summarised below.

### Demographic assumptions

There is no reliable scheme mortality experience, so I have relied on the latest population mortality tables published by the Australian Government Actuary, Australian Life Tables 2010-12 for males and females, as the pensioner mortality rates. I have also incorporated allowance for mortality improvements from 2011 for pensioners at the 25-year rates of improvement set out in the Australian Life Tables 2010-12. These rates are unchanged from the previous review, apart from the allowance for mortality improvements in the interim.

I have assumed 80% of pensioners were married at age 60, with reducing proportions married after that age, and have assumed that female spouses are 4 or 5 years younger than pensioners, depending on age of pensioner.

#### *Summarised demographic assumptions*

Age	Death of Male	Death of Female	Proportion married	Rate of mort Improvement
50	0.0029	0.0018	0.80	0.0205
55	0.0044	0.0026	0.80	0.0243
60	0.0066	0.0040	0.80	0.0271
65	0.0105	0.0062	0.79	0.0286
70	0.0167	0.0103	0.77	0.0286
75	0.0289	0.0181	0.72	0.0268
80	0.0519	0.0332	0.63	0.0228
85	0.0934	0.0664	0.54	0.0172
90	0.1612	0.1281	0.40	0.0102
95	0.2478	0.2188	0.26	0.0021

Spouses are assumed to be 4 years younger than pensioners up to age 90, after which they are assumed to be 5 years younger.

## 5. Valuation method and results

I have valued members' benefits by projecting payments into the future using the assumed mortality rates and rates of pension increase. These future payments have then been discounted to the valuation date using the assumed discount rate. Reversionary spouse benefits are also valued in the same way. All benefits are fully accrued.

Accrued liabilities at 30 June 2019, as well as at the last triennial valuation, are shown below.

	Membership at 2019	2016 4% discount \$M	2019 3.5% discount \$M
Pens (incl. reversions)	3 pensioners 1 reversion	3.929	3.444
Total		3.929	3.444

The accrued liability has decreased from \$3.9M to \$3.4M in the last three years. The progression from 2016 to 2019 is as follows:

Progression from 2016 to 2019	\$M
Liability at 2016	3.93
Expected liability at 2019	3.39
Change in discount rate at 2019 from 4.0% to 3.5% pa	+0.12
Change in assumed future pension inflation rates	-0.30
Salary & CPI inflation lower than expected 2016-2019	-0.16
Other (fewer pensioner deaths than expected, zero vs 0.6 expected)	+0.39
Actual liability at 2019	3.44

The valuation result is based on the assumptions made. The sensitivity of the valuation result to changes in assumptions is demonstrated below.

Assumptions	Impact of change	Liability \$M
Base triennial assumptions		3.44
Discount rate +1%	-6.8%	3.21
CPI inflation rate +1%	+0.3%	3.45
Wage inflation rate +1%	+5.1%	3.62
Mortality +10%	-4.3%	3.29

The valuation result is moderately sensitive to the discount rate and wage inflation assumptions. While the sensitivity analysis demonstrates relatively low sensitivity to the mortality assumptions, the reality is that the valuation result is highly dependent on the actual time of death of the four remaining pensioners.

The employer liability measured in accordance with AASB119 is different to the triennial review liability above, due to a lower discount rate of 1.3% pa under AASB119, compared to the triennial discount rate of 3.5% pa. The accrued liability under AASB119 is \$4.077M. Complete valuation results under AASB119 are provided to DTF separately to this report.

## 6. Projection of payments and liability

The table below sets out expected future payments in each financial year and expected accrued liabilities at the end of each year, using a discount rate of 3.5% pa. The scheme is closed to new entrants, so only existing pensioners and potential spouse reversions are included in the projection. Amounts are expressed in dollars of the projection year.

	Projected Payments \$M	Accrued Liability \$M
2019		3.444
2020	0.341	3.218
2021	0.331	2.994
2022	0.321	2.772
2023	0.312	2.552
2024	0.300	2.336
2025	0.287	2.126
2026	0.272	1.923
2027	0.256	1.730
2028	0.239	1.547
2029	0.222	1.375
2030	0.205	1.215
2031	0.187	1.067
2032	0.170	0.931
2033	0.154	0.808
2034	0.138	0.696
2035	0.123	0.595
2040	0.063	0.237
2045	0.025	0.067
2050	0.006	0.012
2055	0.001	0.001

The only changes in future will be due to indexation of pensions and reductions due to the death of pensioners, with possible consequent reversionary pensions.

## 7. Summary and Recommendations

Based on the assumptions set out in this review the accrued liability at 30 June 2019 is \$3.444M, and cash flows over the next 3 financial years, in inflated terms, are expected to be \$0.34M, \$0.33M and \$0.32M.

Actuarial reviews aid financial reporting and policy analysis, and comply with the spirit of SIS. I recommend that the next review be carried out as at 30 June 2022.



John Rawsthorne FIAA  
15 August 2019