

Part D – Triennial Actuarial Valuation

Note: The following is a summary of the most recent triennial valuation report for the Pooled Fund.

The triennial actuarial valuation of the Pooled Fund and each of the individual Schemes at 30 June 2003 was carried out by Martin Stevenson, FIA, FIAA of Mercer Human Resource Consulting Pty. Ltd. A summary of this valuation as provided by Martin Stevenson follows.

Triennial Actuarial Valuation

Introduction

As requested by the SAS Trustee Corporation (the Corporation) I have carried out an actuarial valuation of the following Schemes as at 30 June 2003 in accordance with the relevant legislation governing each of the Schemes:

- the State Authorities Superannuation Scheme (SASS)
- the State Authorities Non-contributory Superannuation Scheme (SANCS)
- the State Superannuation Scheme (SSS)
- the Police Superannuation Scheme (PSS)

The previous actuarial investigation of SASS, SANCS, SSS and PSS was carried out by myself as at 30 June 2000 and the results were set out in a report dated December 2000.

This report conforms to the requirements of Professional Standard 400 of the Institute of Actuaries of Australia.

For funding purposes and in accordance with legislation distinctions are made between groups of employers as set out in the following table.

Scheme	Employers
SASS	Employers are separated into Parts 1 and 3 in accordance with legislation. Part 1 includes the Crown and other employers, Part 3 includes Hospitals and other bodies.
SANCS	Employers are subdivided in the same manner as above.
SSS	Employers under SSS are essentially equivalent to Part 1 employers under SASS.
PSS	No subdivision necessary.

The General Government Liability Management Fund (GGLMF) was established with effect from 10 July 2002. The GGLMF accepts monies transferred by the Crown Entity and it is expected that these will be used to pay employer contributions to the Pooled Fund. We have presented results both with and without the value of the GGLMF as at 30 June 2003 being included as an asset of the Pooled Fund.

Triennial Actuarial Valuation

The **number of contributors** in each of the Schemes at the current and previous investigation dates is set out below:

Contributors	SASS	SANCS	SSS	PSS	Total
30 June 2003	68,272	106,263	33,536	4,489	212,560
30 June 2000	81,817	128,435	40,501	6,087	256,840
Pensioners	SASS	SANCS	SSS	PSS	Total
30 June 2003	5,617	n/a	35,354	4,877	45,848
30 June 2000	7,121	n/a	31,904	3,886	42,911

The **Pooled Fund assets** at 30 June 2003 totalled \$22,305.5 million compared to \$27,243.2 million at the last valuation. The assets were allocated to each Scheme as follows.

Assets (\$millions)	SASS	SANCS	SSS	PSS	Total
30 June 2003	5,278	471	15,431	1,126	22,306
30 June 2000	6,375	1,108	18,229	1,530	27,243

The **Employer Reserves** in respect of each Scheme are as follows:

\$millions	SASS	SANCS	SSS	PSS	Total
Assets	5,278	471	15,431	1,126	22,306
– Member reserves	3,810	159	4,113	349	8,431
– Death/ Disability Reserves	11	-	-	-	11
– Adjustments	10	0	-	-	10
– Employer Reserve	1,447	312	11,318	777	13,854

The adjustments noted above represent differences between the employer records (which are required for subdivision by Scheme, Part and employer) and the accounts.

As at 30 June 2003, the assets of the GGLMF amounted to \$1,654.4 million.

For all Schemes the key **long term economic assumptions** are as follows:

Long-term assumptions	This valuation % per annum	Last valuation % per annum
Rate of investment return	7.0%	7.0%
Rate of general salary escalation	4.0%	4.0%
Rate of increase in CPI	2.5%	2.5%

These assumptions are the same as at the previous valuation.

No special short term assumptions have been adopted with the long term assumptions applying over all time periods.

Triennial Actuarial Valuation

A comprehensive analysis was carried out in respect of all demographic assumptions used in the investigations of the Pooled Fund Schemes. The analysis mainly related to the three years 1 July 1999 to 30 June 2002. By using an end date twelve months prior to the effective date of the investigation, there was sufficient time to analyse the experience and to determine the basis going forward in considerably greater depth than previous triennials where the experience was assessed to the effective date of the investigation.

This analysis led to changes in relation to the rates of resignation, preservation, mortality (predominantly pensioner), disability, redundancy, retirement and early retirement and proportions choosing lump sums or pensions on retirement.

Changes in pensioner mortality, the assumed rate of people taking pensions and the disability rates in respect of the PSS have resulted in a strengthening of the actuarial basis and hence a source of deficiency to the Schemes overall.

Results

When the GGLMF is taken into account, the unfunded liability for the Pooled Fund has increased from \$6,794.7m to \$15,006.6m over the three years to 30 June 2003. Excluding the GGLMF, the unfunded liability is \$16,661.0m as at 30 June 2003.

The unfunded liabilities of each of the Schemes or sub-divisions within schemes are as follows.

\$millions	SASS	SANCS	SSS	PSS	Total before GGLMF	GGLMF	Total
Employer Accrued Benefits							
– Contributors	4,889.2	1,762.2	6,808.9	1,590.1	15,050.5	-	15,050.5
– Deferreds	-	-	786.2	24.1	810.3	-	810.3
– Pensioners	179.7	-	11,822.3	2,652.3	14,654.3	-	14,654.3
Total Employer Accrued Liability	5,068.9	1,762.2	19,417.4	4,266.5	30,515.1	-	30,515.1
Less							
Employer Reserve Account	1,447.0	311.5	11,318.0	777.5	13,854.0	1,654.4	15,508.4
Employer Unfunded Liability	3,621.9	1,450.7	8,099.4	3,489.0	16,661.0	(1,654.4)	15,006.6
Unfunded Liability at 30 June 2000	1,956.6	847.2	1,884.3	2,106.6	6,794.7	-	6,794.7
Vested Benefits at 30 June 2003	2,141.2	2,142.8	16,319.5	2,777.0	23,380.5	-	23,380.5

Employer contributions towards meeting unfunded liabilities must be grossed up to allow for tax on contributions. Wherever employer contribution rates have been calculated in this report, the contribution rates have been grossed up accordingly.

Triennial Actuarial Valuation

The current and required employer contribution rates for each of the Schemes in order to extinguish the liabilities are as follows:

Scheme	Current Employer Contribution Rate	Required Employer Contribution Rate to extinguish Liabilities Over Working Lifetime of Current Contributions
SASS		
Part 1	Varies by employer. Most common rate is 1.9 times contributors' contributions. Maximum is 2.8 times.	Varies by employer. On average 4.33 times contributors' contributions or 19.5% of Part 1 contributory members' salaries.
Part 3	1.0 times contributors' contributions.	3.86 times contributors' contributions or 19.6% of contributors' salaries.
SANCS		
Part 1	Varies by employer. Most common rate is 2.5% of contributors' salaries.	Varies by employer. On average 5.4% of members' salaries.
Part 3	2.5% of contributors' salaries.	3.3% of members' salaries.
SSS	Varies by employer. Most common rate for non-Crown employers is 1.6 times contributors' contributions. Maximum is 5.4 times.	Varies by employer. On average 5.6 times members' contributions or 67.0% of contributory members' salaries.
PSS	Pay-as-you-go basis.	147.4% of members' salaries.

Sensitivity runs were carried out, and the results are set out in the following table:

Unfunded liability under varying assumptions (\$million)

Basis	SASS	SANCS	SSS	PSS	GGLMF	Total
Standard	3,621.9	1,450.7	8,099.4	3,489.0	(1,654.4)	15,006.6
Investment return plus 1%	3,247.2	1,316.7	5,385.8	3,085.6	(1,654.4)	11,380.9
Investment return minus 1%	4,056.2	1,603.5	11,490.1	3,977.6	(1,654.4)	19,473.0
Salary increases plus 1%	4,044.6	1,604.5	8,597.9	3,636.7	(1,654.4)	16,229.6
Salary increases minus 1%	3,251.3	1,313.4	7,642.0	3,356.8	(1,654.4)	13,909.1
CPI increases plus 1%	3,639.7	1,450.8	10,958.4	3,850.0	(1,654.4)	18,244.5
CPI increases minus 1%	3,608.8	1,450.8	5,724.5	3,185.4	(1,654.4)	12,315.1
Risk free discount rate of 5.1%	4,508.0	1,758.6	14,884.0	4,519.0	(1,654.4)	24,015.2
Discount at the corporate bond rate of 5.5%	4,300.8	1,687.6	13,186.2	4,267.2	(1,654.4)	21,787.4

The above table demonstrates that the rate of investment return has the major impact on the financial condition of the Pooled Fund.

Triennial Actuarial Valuation

Major items contributing to current results

The major items of surplus and deficiency which have affected the Schemes over the period since the last actuarial investigations are as follows:

Item	Comment	Amount \$ billion
Unfunded liability as at 1 July 2000		-6.8
Investment earnings	Investment Earnings of the Pooled Fund were significantly lower than assumed and this resulted in an item of deficiency.	-5.7
Contributions	Contributions to the Crown funded employer reserves (except for PSS) were less than the accruals over the period resulting in a deficiency.	-1.6
Change of actuarial basis	The overall impact of the changes in the valuation basis was an item of deficiency.	-1.1
Impact of disability experience in PSS	The impact of the higher actual than expected disabilities in the PSS was an item of deficiency.	-0.2
Salary increases	Lower than expected salary increases led to a surplus.	0.3
CPI increases	Higher than anticipated CPI increases led to a deficiency.	-0.2
Interest on the previous Unfunded Liability	Interest on the previous unfunded liability at 1 July 2000 resulted in a deficiency.	-1.5
Other		0.1
Unfunded liability as at 30 June 2003 before GGLMF		-16.7
Effect of GGLMF	The GGLMF balance is rounded up.	1.7
Unfunded liability as at 30 June 2003 after GGLMF		-15.0

The major items of deficiency were investment earnings being lower than anticipated, the change in the actuarial basis and interest on the opening unfunded liability. The effect of lower contributions than benefit accruals was off-set by contributions to the GGLMF.



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