

5 December 2006

Report on the Actuarial Investigation of the:

- State Authorities Superannuation Scheme
- State Authorities Non-Contributory
Superannuation Scheme
- State Superannuation Scheme
- Police Superannuation Scheme

As at 30 June 2006

Volume I

SAS Trustee Corporation

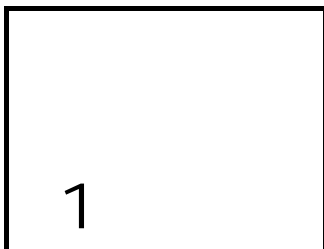
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1. Introduction and Summary of Results

1.1 Introduction

1.1.1 As requested by the SAS Trustee Corporation (the Corporation) we have carried out an actuarial valuation of the following Schemes 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 2003 and the results were set out in a report dated December 2003.

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

Where appropriate, the effect of the General Government Liability Management Fund (GGLMF) has been noted.

1.1.2 Each of the Schemes were established on the following dates and have been closed to new entrants as set out in the table below:

| Scheme | Commencement | Closed to New Entrants |
|--------|-----------------|------------------------|
| SASS | 1 April 1988 | 19 December 1992 |
| SANCS | 1 April 1988 | 8 December 1992 |
| SSS | 1 July 1919 | 1 July 1985 |
| PSS | 1 February 1907 | 31 March 1988 |

The main characteristics of each Scheme are:

- SASS** The benefit from employee contributions is the accumulation of those contributions plus interest.
- The employer financed benefit is generally a lump sum, and is a defined benefit varying with final average salary, period of membership and the level of employee contributions.
- SANCS** Employees do not contribute. The employer financed benefit is generally a lump sum of 3% times final average salary times years of membership.
- SSS** On retirement, a defined benefit (pension or lump sum) is payable. The level of benefit depends upon the number of units that have been purchased.
- PSS** On retirement, a defined benefit (pension or lump sum) is payable. The level of benefit depends upon final average salary and length of membership.

1.1.3 The liabilities of the Pooled Fund are underwritten by the NSW Government. Moreover the NSW Government is committed to achieve full funding by 2030. Hence the risk of members' benefits not being paid is very low. Under these circumstances the purposes of the triennial investigation are:

- (1) To assess the suitability of the actuarial assumptions. The triennial investigation provides an opportunity to carefully consider recent experience and to modify the actuarial basis accordingly;
- (2) To calculate the unfunded liability on a Scheme basis, thereby determining the extents to which the Schemes and the Pooled Fund are funded;
- (3) To calculate the overall level of contributions required to fund the benefits provided by the Schemes;
- (4) To provide information which can be used for other financial purposes such as determining the level of contributions on an employer by employer basis, and for detailed projections of future cash flows.

- 1.1.4 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 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. Refer Section 6 Volume II for a full listing of the employers. |
| SANCS | Employers are subdivided in the same manner as SASS above. |
| SSS | Employers under SSS are essentially equivalent to Part 1 employers under SASS. |
| PSS | No subdivision necessary. |

Part 2 no longer exists. It mainly comprised of employers that were transferred out to the Local Government Superannuation Scheme and the Energy Industries Superannuation Scheme.

In this report separate information is provided in respect of Part 1 and Part 3. In future investigations this information will be amalgamated in this report, with Part 3 information shown separately in the report on the financial position of individual employers.

- 1.1.5 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 2006 | 56,986 | 86,875 | 26,616 | 3,297 | 173,774 |
| 30 June 2003 | 68,272 | 106,263 | 33,536 | 4,489 | 212,560 |

| Pensioners | SASS | SANCS | SSS | PSS | Total |
|--------------|-------|-------|--------|-------|--------|
| 30 June 2006 | 4,653 | n/a | 39,754 | 5,697 | 50,104 |
| 30 June 2003 | 5,617 | n/a | 35,354 | 4,877 | 45,848 |

Both SASS and SANCS are subdivided according to employers denoted in legislation as Part 1 or Part 3 employers. As at 1 July 2006 the numbers of members under each part of SASS and SANCS were as follows:

| Contributors | Part 1 | Part 3 | Total |
|--------------|--------|--------|--------|
| SASS | 40,051 | 16,935 | 56,986 |
| SANCS | 69,940 | 16,935 | 86,875 |

- 1.1.6 The Pooled Fund assets at 30 June 2006 totalled \$28,578.1 million compared to \$22,305.5 million at the last valuation. The assets were allocated to each Scheme as follows:

| Assets (\$millions) | SASS | SANCS | SSS | PSS | Total |
|---------------------|-------|-------|--------|-------|--------|
| 30 June 2006 | 8,590 | 1,145 | 17,881 | 962 | 28,578 |
| 30 June 2003 | 5,278 | 471 | 15,431 | 1,126 | 22,306 |

The assets of the GGLMF amounted to \$6,729 million as at 30 June 2006 (and are not included in the above table).

- 1.1.7 The Employer Reserves as at 30 June 2006 and excluding the GGLMF in respect of each Scheme are as follows:

| \$millions | SASS | SANCS | SSS | PSS | Total |
|--|-------|-------|--------|-----|--------|
| Assets | 8,590 | 1,145 | 17,881 | 962 | 28,578 |
| Less, | | | | | |
| ➤ Member Reserves (including SASS and SANCS deferreds) | 5,511 | 261 | 4,970 | 407 | 11,149 |
| ➤ Death/ Disability Reserves | 20 | - | - | - | 20 |
| Adjustments | - | 21 | - | - | 21 |
| Employer Reserve | 3,059 | 863 | 12,911 | 555 | 17,388 |

The adjustments noted above represent differences between the employer records (which are required for subdivision by Scheme, Part and employer) and the accounts. In addition co-contributions in SANCS have been removed from the SANCS Employer Reserve.

- 1.1.8 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 | 7.7% for current pensioners, 7.0% other members | 7.0% |
| Rate of general salary escalation | 4.0% | 4.0% |
| Rate of increase in CPI | 2.5% | 2.5% |

The investment return assumption has been increased from 7.0% at the previous valuation to a weighted average long term rate of 7.3% per annum. The rate of investment return assumption is higher for current pensioners because no tax is payable in respect of assets backing Current Pension Liabilities.

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

The change in discount rate has resulted in a reduction in the liability and hence a source of surplus to the Schemes.

- 1.1.9 A comprehensive analysis was carried out in respect of all demographic assumptions used in the investigations of the Pooled Fund Schemes. The analysis related mainly to the three years 1 July 2002 to 30 June 2005.

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

Changes in pensioner mortality and deferral of retirement have offset the effect of increased disability rates in respect of the PSS and the assumed rate of people taking pensions with the result that the demographic basis changes have produced only a marginal strengthening of the basis and hence a small source of deficiency to the Schemes overall.

1.2 Results

- 1.2.1 When the GGLMF is taken into account, the unfunded liability for the Pooled Fund has reduced from \$15,006.6m to \$10,435.7m over the three years to 30 June 2006. Excluding the GGLMF, the unfunded liability is \$17,164.7m as at 30 June 2006.
- 1.2.2 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 | 5,888.2 | 2,094.6 | 6,487.9 | 1,846.7 | 16,317.4 | - | 16,317.4 |
| ➤ Deferreds | - | | 830.6 | 20.4 | 851.0 | - | 851.0 |
| ➤ Pensioners | 258.8 | | 13,744.2 | 3,380.5 | 17,383.5 | - | 17,383.5 |
| Total Employer Accrued Liability | 6,147.0 | 2,094.6 | 21,062.7 | 5,247.6 | 34,551.9 | - | 34,551.9 |
| Less, Employer Reserve Account | 3,059.0 | 862.7 | 12,910.6 | 554.9 | 17,387.2 | 6,729.0 | 24,116.2 |
| Employer Unfunded Liability | 3,088.0 | 1,231.9 | 8,152.1 | 4,692.7 | 17,164.7 | (6,729.0) | 10,435.7 |
| Unfunded Liability at 30 June 2003 | 3,621.9 | 1,450.7 | 8,099.4 | 3,489.0 | 16,661.0 | (1,654.4) | 15,006.6 |

The employer unfunded liabilities shown above have not been grossed up for contributions tax.

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.

- 1.2.3 The theoretical required contribution rates if the GGLMF is excluded (over the expected working life-time of contributors) are:

| | | Contribution rate required | As % members' salaries |
|--------------|--------|--------------------------------------|-------------------------------|
| SASS | Part 1 | 3.22 times contributor contributions | 18.1% |
| SASS | Part 3 | 5.32 times contributor contributions | 32.9% |
| SANCS | Part 1 | 6.1% of members' salaries | 6.1% |
| SANCS | Part 3 | 4.7% of members' salaries | 4.7% |
| SSS | | 7.3 times members' contributions | 99.3% |
| PSS | | 362% of members' salaries | 362% |

No account of possible Pre 1 July 1988 Funding Credits (PJFC) utilization has been made in respect of these rates, nor of the current GGLMF balance.

- 1.2.4 If the current balance in the GGLMF is allocated to each section of the Fund in proportion to current unfunded liability and assuming no future tax on employer contributions the adjusted theoretical required contribution rates (over the expected working life-time of contributors) are:

| | | Contribution rate required | As % members' salaries |
|--------------|--------|--------------------------------------|-------------------------------|
| SASS | Part 1 | 2.27 times contributor contributions | 12.8% |
| SASS | Part 3 | 2.47 times contributor contributions | 15.3% |
| SANCS | Part 1 | 4.1% of members' salaries | 4.1% |
| SANCS | Part 3 | 1.3% of members' salaries | 1.3% |
| SSS | | 4.3 times members' contributions | 59.0% |
| PSS | | 218% of members' salaries | 218% |

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

| Basis | Unfunded liability under varying assumptions (\$million) | | | | | |
|--|---|--------------|------------|------------|--------------|--------------|
| | SASS | SANCS | SSS | PSS | GGLMF | Total |
| Standard | 3,088.0 | 1,231.9 | 8,152.1 | 4,692.7 | (6,729.0) | 10,435.7 |
| Investment return plus 1% | 2,627.9 | 1,083.3 | 5,416.5 | 4,132.7 | (6,729.0) | 6,531.4 |
| Investment return minus 1% | 3,622.4 | 1,401.3 | 11,531.0 | 5,478.0 | (6,729.0) | 15,303.7 |
| Salary increases plus 1% | 3,564.2 | 1,402.3 | 8,604.6 | 4,851.2 | (6,729.0) | 11,693.3 |
| Salary increases minus 1% | 2,666.0 | 1,079.9 | 7,733.5 | 4,593.4 | (6,729.0) | 9,343.8 |
| CPI increases plus 1% | 3,146.6 | 1,231.9 | 11,090.3 | 5,157.8 | (6,729.0) | 13,897.6 |
| CPI increases minus 1% | 3,038.0 | 1,231.9 | 5,687.0 | 4,347.0 | (6,729.0) | 7,574.8 |
| Rate of salary increase 4.0% per annum to 30 June 2008 and 3.5% per annum thereafter | 2,922.5 | 1,172.6 | 8,010.7 | 4,674.2 | (6,729.0) | 10,051.0 |

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

1.3 Major Items contributing to current results

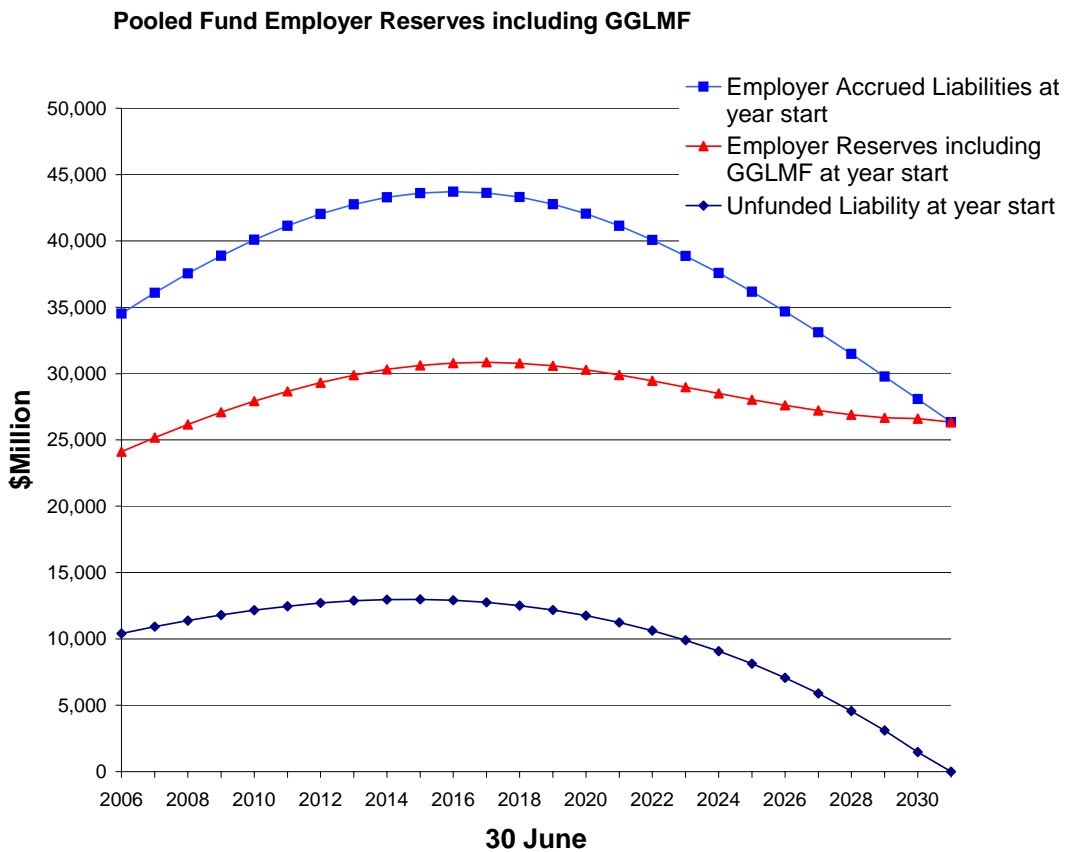
- 1.3.1 The major items of surplus and deficiency which have affected the Schemes over the period since the last actuarial investigation are as follows:

| Item | Comment | Amount of deficiency / (surplus) \$ billion |
|---|--|---|
| Unfunded liability as at 1 July 2003 (before GGLMF) | | 16.7 |
| Investment Earnings | Investment Earnings of the Pooled Fund were significantly higher than assumed and this resulted in an item of surplus. | -5.1 |
| Contributions | Contributions to the Crown funded employer reserves were less than the accruals over the period resulting in a deficiency. | 1.6 |
| Change of actuarial basis | Pensioner assumptions | -0.7 |
| | Lower commutation | +0.3 |
| | PSS higher disability | +0.6 |
| | Late Retirements | -0.2 |
| | Pensioner discount rate | -1.3 |
| | Other net effects | +0.1 |
| | The overall impact of the changes in the valuation basis was an item of surplus. | -1.2 |
| 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 |
| Other exits | Generally fewer other exits was a further item of deficiency. | 0.1 |
| Salary Increases | Higher than expected salary increases led to a deficiency. | 1.2 |
| CPI Increases | Lower than anticipated CPI increases led to a surplus. | -0.1 |
| Interest on the previous Unfunded Liability. | Interest on the previous unfunded liability at 1 July 2003 resulted in a deficiency. | 3.7 |
| Other | | 0.1 |
| Unfunded liability as at 30 June 2006 before GGLMF | | 17.2 |
| Effect of GGLMF | The GGLMF balance. | -6.7 |
| Unfunded liability as at 30 June 2006 after GGLMF | | 10.4 |

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

1.4 Future Employer Reserves and Unfunded Liability

1.4.1 Consolidated Pooled Fund Employer Reserves - Projected Reserves and Liabilities



The Pooled Fund's financial position in respect of the Employer's Reserve has been projected to 30 June 2031 and the results are set out above. The above graph projects total employer contributions of \$1,200 million per annum increasing by CPI thereafter, until 2031. This level of contribution is illustrative only and was chosen to target a zero unfunded liability at the end of the year 2030-2031. The balance of the GGLMF was included in employer reserve assets at 30 June 2006.

Note that although the graph above is truncated at 2031, employer reserves and accrued liabilities remain significant for a number of years after 2031.

SASS and SANCS deferred benefits are accumulation benefits and hence are omitted from this projection.

Taking into account the GGLMF, the progress of the unfunded liability over the period from 1 July 2000 and projected to the next valuation is as follows:

| | Unfunded Liability \$ million |
|--------------|--|
| 1 July 2000 | 6,794.7 |
| 1 July 2003 | 15,006.6 |
| 1 July 2006 | 10,435.7 |
| 1 July 2009* | 11,824.7 |

* Estimate



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2

2. Summary of Information Provided

For the purposes of our investigation we have been provided with information from the Corporation and from the Administrator, Pillar in respect of legislation, membership and financial statements for each of the Schemes within the Pooled Fund.

2.1 Legislation

- 2.1.1 We have been provided with the consolidated legislation in respect of each of the Schemes within the Pooled Fund. The principal changes to the operation of the Scheme through this legislation in the period since the previous investigation are:
- Provisions were enacted to facilitate splitting of superannuation benefits on divorce in response to Commonwealth Family Law legislation;
 - Provisions to allow NSW Fire Brigade staff to relinquish death or incapacity benefit cover in SASS in exchange for cover in the firefighters' Death and Disability Superannuation Fund;
 - Provisions allowing death benefits to be payable at a higher level, eliminating any previous offset for 15% tax on employer contributions;
 - Amendments allowing for various options for payment of surcharge debts;
 - Provisions to enable tax co-contributions by members of associated schemes to be accepted into SANCS.

- 2.1.2 A summary of the contribution, benefit and transitional provisions of each of the relevant Acts and Regulations as at 30 June 2006 forms Section 1 of Volume II to this Report. In brief, each of the Schemes provides benefits as follows:

| | |
|--------------|---|
| SASS | Provides an accumulation benefit from employee contributions and a defined benefit from employer contributions. The defined benefit is determined according to the number of points accrued by a member, and the points earned varies with the level of member contributions. If an employee contributes 6% of salary for thirty years then he/she qualifies for an employer-financed benefit of 4.5 times final average salary (less 15% tax in respect of periods after 1 July 1988). |
| SANCS | Provides a defined benefit to members of SASS, PSS and SSS. The Scheme was originally established to meet Award obligations. The Scheme is non-contributory. |
| SSS | Provides a defined benefit on retirement, which reflects the “units of pension”, purchased by members. An accumulation benefit is payable on resignation. |
| PSS | Is a defined benefit scheme where members can take either pensions or a commuted lump sum. Due to the nature of the occupation specific benefits are payable if injury or death occurs on duty. |

2.2 Membership

- 2.2.1 Pillar provided us with computer disks containing certain information on:

- any person who is or had been a contributor to any of the Pooled Fund Schemes at any time during the period 1 July 2003 to 30 June 2006; and
- Persons receiving pensions from the Schemes at any time during the period 1 July 2003 to 30 June 2006; and
- Persons who had a deferred interest in any of the Schemes during the period 1 July 2003 to 30 June 2006.

- 2.2.2 Section 4 of Volume II of this report contains detailed analysis of the Schemes’ membership data provided.

- 2.2.3 The membership data was edited and checked for reasonableness, and we are satisfied as to its accuracy for the purposes of this investigation.

2.3 Financial

- 2.3.1 The Corporation provided us with copies of its Annual Report for the years ended 30 June 2004, 2005 and 2006, which include the audited accounts. We were also provided with schedules showing the breakdown of these accounts between the various Schemes and reserves and computer disc records in respect of individual Part 1 employer reserves.
- 2.3.2 Volume II contains further details from the accounts and includes an apportionment of assets between the various Scheme reserves for the purposes of the valuation.



3

3. Assets and Accounts

When conducting an actuarial investigation of a Scheme the actuary needs to have regard to both the assets and the liabilities of the Scheme. It is incumbent on the actuary to review the underlying assets of the Scheme to see if they are an appropriate match for the emerging liabilities. This section outlines our review of the assets of the Pooled Fund in relation to the actuarial valuation of the Schemes.

3.1 Structure of Investments

- 3.1.1 Following the introduction of the Superannuation Administration Act 1987, the assets of the four Schemes were pooled, for investment and related purposes. There is no separate portfolio of assets for each Scheme as such, but for convenience reference to ‘the Fund’ may be taken as reference to that part of the Pooled Fund that the Trustee holds in trust for that particular Scheme. The following discussion, however, relates to the Pooled Fund in its entirety.
- 3.1.2 The General Government Liability Management Fund (GGLMF) was established in accordance with the *General Government Liability Management Fund Act 2002 No 60* with effect from 10 July 2002. The GGLMF accepts monies transferred by the Crown Entity and may be used to pay employer contributions to the Pooled Fund. For the purpose of this valuation we have presented results both with and without the value of the GGLMF as at 30 June 2006 being included as an asset of the Pooled Fund.
- 3.1.3 The Auditor-General reported that he has conducted an audit of the accounts of the Pooled Fund as at 30 June 2006, to provide reasonable assurance that they are free of material misstatement. In his opinion the financial statements of the Pooled Fund complied with Section 41B of the Public Finance and Audit Act 1983. They presented the financial position of the Fund as at 30 June 2006 fairly and in accordance with applicable Accounting Standards.

3.2 Investment Arrangements

- 3.2.1 As at 30 June 2006 investment management for the Pooled Fund was carried out by twenty investment managers. At the previous triennial investigation investment management was carried out by thirteen investment managers.
- 3.2.2 The Trustee manages four investment portfolios: Growth, Balanced, Conservative Growth and Cash. However the latter three strategies only apply in respect of Member Investment Choice for certain members of the Pooled Fund. The assets backing the defined benefit liabilities are invested in the Growth strategy.
- 3.2.3 The Trustee, in conjunction with its asset consultant, and its investment managers, has developed a strategic asset allocation, having regard to acceptable levels of risk for the Pooled Fund. The Trustee reports that it does not permit the use of derivatives to obtain leverage of the investment portfolio, but it does use derivatives to limit the risk of adverse market movements. The Trustee has developed a Derivatives Risk Statement to comply with APRA guidelines on derivatives exposure.

3.3 Investment Guidelines for the Pooled Fund

- 3.3.1 The Trustee first sets a Strategic Asset Allocation which is the percentage of Growth Assets and Defensive Assets. For the Growth portfolio, the percentages are 74.5% Growth Assets and 25.5% Defensive Assets.

The proportions allocated to each Strategy remain within a margin of plus or minus 5% of these percentages. However, the allocation to the asset sectors that make up these broader categories may change. The Fund's asset allocations are reviewed formally at least once a year and are constantly monitored through-out the year.

As at 30 June 2006, the Strategic Asset Allocation was:

| | % |
|-------------------------------|-------|
| Australian equities | 33.0 |
| International equities | 27.0 |
| Australian direct property | 4.5 |
| Australian listed property | 2.25 |
| International listed property | 2.25 |
| Private equity | 3.0 |
| Infrastructure (unlisted) | 5.0 |
| Australian fixed income | 10.0 |
| International fixed income | 8.0 |
| Cash | 5.0 |
| | 100.0 |

- 3.3.2 Through the index manager, State Street Global Advisers, Australia Limited, the Pooled Fund passively rebalances the tradeable asset classes on a daily basis.

- 3.3.3 The long term investment strategy for the Growth Portfolio is to exceed the change in CPI by 4.5% per annum over rolling 10 year periods. In addition, short term performance up to three years is monitored against comparable funds as measured by the appropriate universe of managers in the Intech Super Survey.

3.4 Asset Valuation

- 3.4.1 Investments are valued at the balance date on a net market value basis. The estimated market value is determined as the net realisable value after the deduction of the estimated costs of disposal. Changes in market values, representing gains or losses, are brought to account as investment revenue in the period in which they occur. The Trustee has determined details of the method of valuation used for each class of investment as follows:

| Investment Class | Method of valuation |
|---------------------------|--|
| Short Term Securities | Market rates. |
| Fixed interest securities | Relevant fixed interest securities markets. |
| Equities | Relevant stock exchange quoted last sale price, or if unlisted, independent valuation. |
| Property | Current market value determined individually by independent registered valuers on the basis of an exchange between knowledgeable and willing parties in an arm's length transaction. |

3.5 Pooled Fund Performance and Allocation Summary

3.5.1 The table below summarises the total income and expenditure of the Pooled Fund during the intervalation period. The data has been taken from the audited annual reports of the Trustee. According to the Audit Report, all assets have been accounted for and valued in accordance with the principles described above.

| Financial Year ending 30th June | 2004 \$m | 2005 \$m | 2006 \$m | Total \$m |
|--|---------------------|---------------------|---------------------|----------------------|
| Reserves at beginning | 22,305.5 | 24,215.2 | 25,901.0 | 22,305.5 |
| Income | | | | |
| Contributions | | | | |
| ➤ Employer | 325.9 | 331.5 | 273.7 | 931.1 |
| ➤ Employee | 473.5 | 494.6 | 507.2 | 1,475.3 |
| Investment income | 3,251.0 | 3,353.5 | 4,371.5 | 10,976.0 |
| Miscellaneous | 1.7 | 3.9 | 2.7 | 8.3 |
| Net Transfers | -0.3 | -7.6 | -0.4 | -8.3 |
| Total income | 4,051.8 | 4,175.9 | 5,154.7 | 13,382.4 |
| Expenditure | | | | |
| Total benefits | 2,038.0 | 2,398.0 | 2,457.8 | 6,893.8 |
| Expenses of management | 38.0 | 36.1 | 34.4 | 108.5 |
| Investment Expenses | 65.9 | 59.4 | 60.1 | 185.4 |
| Tax | -13.9 | -17.7 | -87.6 | -119.2 |
| Superannuation Contributions Surcharge | 14.1 | 14.3 | 12.9 | 41.3 |
| Total expenditure | 2,142.1 | 2,490.1 | 2,477.6 | 7,109.8 |
| Reserves at 30 June | 24,215.2 | 25,901.0 | 28,578.1 | 28,578.1 |

In addition, the balance of the GGLMF as at 30 June 2006 was \$6,729 million.

3.5.2 During the three year period to the 30 June 2006 the Pooled Fund earned net investment revenue of \$10,976 million.

| | Income \$m | Changes in Market Value \$m | Total Revenue \$m |
|--------------|-----------------------|--|------------------------------|
| 2004 | 971 | 2,280 | 3,251 |
| 2005 | 1,154 | 2,199 | 3,354 |
| 2006 | 1,125 | 3,246 | 4,371 |
| TOTAL | | | 10,976 |

- 3.5.3 After the deduction of investment-related expenses, and after taking into account investment income tax, the net rates of return in the Growth portfolio are as follows:

| Financial Year | Net Investment Return % per annum | Investment Return net of increase in CPI % per annum | Investment Return net of increase in AWOTE % per annum |
|-----------------------|--|---|---|
| 1.7.2003 to 30.6.2004 | 13.5 | 10.5 | 10.5 |
| 1.7.2004 to 30.6.2005 | 13.0 | 10.5 | 6.6 |
| 1.7.2005 to 30.6.2006 | 15.8 | 11.8 | 13.7 |

Note that the above “Net Investment Return” is the rate of return credited to contributors’ accounts. Some employer reserves achieve a higher return because of the tax exemption associated with Current Pension Liabilities.

The compound average return over the period was 14.1% per annum. By way of comparison, the compound average return over the three-year period of the previous actuarial investigation was -1.4% per annum.

By way of further comparison, the asset weighted rate of return for the three years ended 30 June 2006 of investment managers included in the Intech Super Growth Survey was 13.9% per annum.

The assets of the Pooled Fund are held in a wide range of investments, in accordance with the investment objectives. The following table shows the investment allocation for the Pooled Fund, as at 30 June 2006 and as at 30 June 2003.

| | Investments at 30 June 2003 | | Investments at 30 June 2006 | |
|---------------------------|------------------------------------|--------------|------------------------------------|--------------|
| | \$m | % | \$m | % |
| Short Term Securities | 2,459.6 | 11.1 | 1,421.2 | 5.0 |
| Fixed Interest | 2,902.5 | 13.1 | 2,996.7 | 10.4 |
| Australian Equities | 7,510.7 | 34.0 | 12,420.2 | 43.3 |
| International Investments | 6,376.5 | 28.9 | 9,336.5 | 32.5 |
| Property | 2,843.1 | 12.9 | 2,524.8 | 8.8 |
| Total Investments | 22,092.4 | 100.0 | 28,699.4 | 100.0 |

3.6 Asset Risk Management

3.6.1 It is noted that the Trustee has suitable risk management policies in place.

3.7 GGLMF

3.7.1 As at 30 June 2006 the GGLMF assets of \$6,729 million were held in bank bills. The investment strategy of the GGLMF is to invest in cash or very short term liquid fixed interest securities.

3.8 Opinion

3.8.1 The liabilities of the Pooled Fund are long term in nature, and increase in line with increases in CPI and general salary inflation. The asset allocation of 74.5% Growth Assets and 25.5% Defensive Assets is an appropriate investment strategy in these circumstances. Moreover the Trustee has appropriate risk management policies in place.

4

4. Financial Structure of each Scheme and the GGLMF

Each of the Schemes form part of the Pooled Fund and the Corporation has administered the State Authorities Superannuation Scheme, the State Authorities Non-Contributory Superannuation Scheme, the State Superannuation Scheme and the Police Superannuation Scheme as one fund.

Each of the Schemes has their own structure and this is described below.

4.1 SASS

4.1.1 For the purpose of the actuarial investigation, SASS has six separate sub-divisions, with each employer group (employers under each of Parts 1 and 3) having three divisions:

- Contributors' Reserves
- Employers' Reserves
- Deferred Reserves

The assets of a Part are available only to pay benefits in respect of members of that Part; and in the case of employers in Part 1, the assets are similarly segregated at an employer level. (This segregation is carried out in the accounts, not by way of separation of physical assets).

4.1.2 Contributors' Reserves

All the Contributors' Reserves operate in a similar manner to a personal bank account. In effect, an account is maintained for each contributor of the Scheme. In each superannuation year, the account is credited with the opening balance of the account, and monthly thereafter with contributions made by the contributor and interest for the Scheme's investment earnings. The account is debited with charges in respect of expenses of management and, for those contributors who are covered for additional benefits, charges in respect of those additional death and disability benefits

Whatever the cause of exit, a benefit is payable to a contributor who leaves the Scheme equal to the full amount in his/her Contributor's Reserve account. Moreover, in the event of the death or total and permanent disablement of a contributor covered for "additional benefits" as defined in Volume II, an additional amount is paid from the Contributors' Reserve account. Details of these benefits are set out in Volume II.

Within the Contributors' Reserve, a death and invalidity reserve is established. This reserve is financed by deductions from contributors' contributions. Any employee-financed additional benefits which become payable on death or disablement are paid out of the reserve. The deductions from contributors' contributions are determined by multiplying the additional benefit for each contributor by a death and disability charge that varies according to age and sex. The adequacy of these death and disability charges is not within the scope of this investigation however we note that the reserve was at an adequate level when it was last reviewed. The reserve will be reviewed following the completion of this investigation.

4.1.3 Employers' Reserves

The Employers' Reserves exist to provide benefits to former contributors in respect of contributions made by employers. However, the funding strategy of each Employers' Reserve is different.

Part 1 Employers

The current arrangements applying to all Part 1 employers are as follows:

- (a) Each employer has an employer reserve account which is credited with contributions by employers at a multiple of contributors' contributions, increased by investment earnings and debited with benefit payments and management costs;
- (b) Each year, each employer is advised the amount of its unfunded past service liability, being the difference between the total accrued superannuation liability determined in accordance with Accounting Standard AASB 119 (ie the present value of benefits payable in respect of completed service) and the balance in the employer reserve;
- (c) From time to time employers are advised the contributions required to fund the liabilities that accrue each year. For Part 1 Budget Sector employers this is currently advised as 1.9 times contributors' contributions;

However, this multiple is "notional" in that Budget Sector agencies use it to calculate their superannuation expense for reporting purposes only. The Crown in line with a long-term funding plan makes actual employer contributions on their behalf. This plan aims to extinguish Budget Sector unfunded liabilities by 2030, as consistent with the provisions of the Fiscal Responsibility Act 2005.

- (d) Part 1 Non-Budget Sector employers are required to fully fund their current service liabilities by contributing at a rate advised by the Corporation after receiving Treasury approval. Additionally they are required to fund their unfunded past service liability by 2030.

As a result of the current funding arrangements the employer contribution ratios (expressed as “billing multiples”) cover a wide range, currently up to 3.8 times contributors’ contributions.

Most of the employer-financed benefits are defined in terms of the contributor’s salary at or before date of exit. Because experience will diverge from time to time from assumptions made in relation to salaries and other factors affecting benefits and the build-up of the fund, it is not possible to be certain of the contributions that should be paid to secure these benefits.

The investigation is to be carried out on an individual employer basis. The purposes of the triennial actuarial investigations in respect of Part 1 are:

- (i) to assess the suitability of the actuarial assumptions. This assessment is only done every three years as annual assessments cannot be done due to tight time constraints;
- (ii) to calculate the unfunded past service liability as at the valuation date;
- (iii) to provide information in respect of the financial strength and future funding commitments of the employer reserves.

Part 3 employers

The Employers’ Reserve in respect of employers under Part 3 is intended to fully provide the employer-financed benefits to former contributors of these employers. The reserve is credited in each case with contributions by employers according to the Act, increased by investment earnings and debited with benefit payments and management costs.

The Act specifies that the employers should contribute 1.0 times contributors’ contributions (or such higher number as may be prescribed with the concurrence of the Treasurer).

Most of the employer-financed benefits are defined in terms of the contributor’s salary at or before date of exit. For the reasons mentioned above, it is not possible to be certain of the contributions that should be paid to secure these benefits.

The purpose of this investigation in respect of the Employers’ Reserve is to assess or estimate the extent to which the current contribution levels, together with the amount held in the reserve at the investigation date, are sufficient to finance the defined benefits and to recommend alterations in the prescribed rate if required.

4.1.4 **Deferred Reserves**

When a member leaves SASS before a 'condition of release' is satisfied, and elects to receive a deferred benefit (rather than taking the benefit in cash) an account is set up in the member's name in the deferred reserve.

This account is credited with investment return and debited with expenses.

If the member decides to receive the benefit before attaining a condition of release, then the accumulated cash resignation benefit is payable with the difference between the deferred account balance and the benefit payable transferred back to the Employer Reserve.

4.1.5 **Unfunded Superannuation Liabilities**

Calculations in respect of the unfunded superannuation liabilities of employers under Part 1 are required annually for inclusion in the financial statements of statutory bodies.

Under AEIFRS, the calculations must be carried out in accordance with AASB 119. The methodology and assumptions of AASB 119 differ from those adopted for the purposes of this investigation.

4.2 **SANCS**

4.2.1 For the purposes of the actuarial investigation SANCS has four separate subdivisions, with each employer group (employers under each of Parts 1 and 3) having two divisions:

- Employers' Reserves
- Deferred Reserves

Within Part 1, the employer reserve is maintained at an individual employer level.

4.2.2 **Part 1 Employers**

The current arrangements applying to all Part 1 employers are as follows:

- (i) Each employer has an employer reserve account which is credited with contributions by the employer at a percentage of members' salaries, increased by investment earnings and debited with benefit payments, tax and management costs;
- (ii) Each year, each employer is advised the amount of its unfunded past service liability, being the difference between the total accrued superannuation liability (i.e. the present value of benefits payable in respect of service prior to the calculation date) and the balance in the employer reserve;

- (iii) Employers are advised of the contributions required to fund the liabilities accruing each year. This is generally advised as 2.5% of salaries, although pay-as-you-go employers (Consolidated Fund or supported Government employers) are only required to contribute at 0.5% of salaries.

However, this contribution rate is “notional” in that Budget Sector agencies use it to calculate their superannuation expense for reporting purposes only. The Crown in line with a long-term funding plan makes actual employer contributions on their behalf. This plan aims to extinguish Budget Sector unfunded liabilities by 2030, consistent with provisions of the Fiscal Responsibility Act 2005.

- (iv) Part 1 Non-Budget Sector employers are required to fully fund their current service liabilities by contributing at a rate advised by the Corporation. Additionally they are required to fund their unfunded past service liability by 2030.
- (v) With the concurrence of the Treasurer, the Corporation determines for each employer the percentage of members' salaries, which is to be its contribution rate for the following year. In setting this rate the Corporation has regard to the contributions advised as in (iii) and (iv) above.

Most of the employer-financed benefits are defined in terms of the contributor's salary at or before date of exit. Because experience will diverge from time to time from assumptions made in relation to salaries and other factors affecting benefits and the build-up of the fund, it is not possible to be certain of the contributions that should be paid to secure these benefits.

The purposes of regular actuarial investigations in respect of Part 1 are:

- (i) to assess the suitability of the actuarial assumptions,
- (ii) to calculate the unfunded past service liability as at the valuation date,
- (iii) to provide information in respect of the financial strength and future funding commitments of the employer reserves.

4.2.3 Part 3 Employers

The Employers' Reserves in respect of employers under Part 3 are intended to fully provide the Basic Benefits for employees of these employers. The Act specifies that the Corporation shall determine, with the concurrence of the Treasurer, the percentage contribution rate. This rate has been determined as 2.5% of members' salaries.

Benefits are defined in terms of the member's salary at or before the date of exit. Further, experience will diverge from time to time from assumptions made in relation to salaries and other factors. It is, therefore, not possible to be certain of the contributions that should be paid to secure these benefits.

The purpose of the actuarial investigation is to assess or estimate the extent to which the contribution rate prescribed in the legislation or determined by the Corporation, together with the amount held in the employer reserve at the investigation date, is sufficient to finance the benefits, and to recommend alterations in the prescribed or determined rate if required.

4.2.4 **Deferred Reserves**

When a member leaves SANCS before a 'condition of release' is satisfied, an account is set up in the member's name in the deferred reserve.

This account is credited with investment return and debited with expenses.

4.2.5 **Unfunded Superannuation Liabilities**

In the same manner as SASS, calculations in respect of the unfunded superannuation liabilities of employers under Part 1 are required annually for inclusion in the financial statements of statutory bodies.

4.3 **SSS**

4.3.1 SSS comprises two Reserves:

- The Contributors' Reserve and
- The Employers' Reserve - which in turn comprises of a number of individual Employer Reserves.

4.3.2 **Contributors' Reserve**

Since 30 June 1989 the Trustee has maintained a reserve called the Contributors' Reserve. It is credited with employee contributions, and interest at a rate determined by the Trustee. When a contributor ceases employment, an amount is transferred to the reserve account of the contributors' latest employer. For convenience, the event that initiates that action is referred to as "benefit emergence", although in the case of an election for a deferred benefit a benefit may not become payable for some time.

The amount payable from the Contributors' Reserve is the sum of the employee's contributions accumulated with interest at the rate of 3.5% per annum until 1 July 1972, and thereafter at rates fixed by the Trustee. That sum is referred to for convenience as the "Section 33B accumulation".

The amount payable from the Contributors' Reserve is further limited, namely to the value of the benefit. The value of pension or deferred benefits is determined by Pillar, using factors supplied by the Scheme Actuary. This limitation is not generally expected to apply.

The amount payable from the Contributors' Reserve is for convenience referred to as the "Section 33B transfer". In the case of resignations, it is paid directly to the beneficiary, and the balance of the lump sum, if any, is paid from the Employer reserve from which the benefit is to be paid.

4.3.3 Employer Reserves

The Administrator maintains for each employer a reserve, or a reserve for each cost centre within each employer. Each is credited with employer contributions, transfers from the Contributors' Reserve, and interest at a rate determined by the Trustee. It is debited with benefit payments, expenses and tax.

The amount of the contribution payable by each employer is currently a multiple (which may be less than one) of the contributions made by the employees. The Trustee, with the concurrence of the Treasurer, periodically fixes the multiple for each employer.

When a contributor exits from the Fund, an amount is transferred from the Contributors' Reserve as part of the benefit payable. If the benefit is a lump sum, the balance of the benefit is debited to the Employer Reserve. If the benefit is a pension, the money transferred from the Contributors' Reserve is placed in the Employer's Reserve and may remain there for some time before it is expended.

If an Employer Reserve becomes insufficient to meet benefit payments immediately due, the Trustee may require the employer to meet the necessary payment. In effect, the employer guarantees the benefit.

The Trustee may, with the concurrence of the Treasurer, adjust an Employer's Reserve whenever, through a change in circumstances, it appears appropriate to do so.

Treasurer's Direction 510.01 was introduced in January 1991. It refers to employers fully or partly Budget funded (in this context referred to as Consolidated fund employers) and now reads as follows:

GOVERNMENT SERVICES (fully budget funded) **COMMERCIAL ACTIVITIES** (off-budget agencies and activities belonging to Government Service Organisations) and **SEMI-COMMERCIAL AUTHORITIES** (partly subsidised by the budget).

Organisations in this category should:

1. Recognise all employee entitlements in the financial period in which they emerge.
2. Progressively seek to recover these from revenues
3. Not fund the liability unless otherwise directed by the Treasurer.

This direction requires two calculations to be made for each subject employer for the ensuing year:

- Estimated pension payable and commutation and lump sum death and resignation benefits payable; and
- Estimated Section 33B transfers

The preliminary estimate of the amount payable from the Consolidated Fund to the State Superannuation Fund in that year, consistent with the Treasurer's Direction, is the difference between the two calculations. The preliminary estimate is subject to further adjustment in respect of benefit payments that occur at irregular intervals, eg. retrenchment benefits and transfer payments to other funds.

Treasurer's Direction 510.02 refers to Non Budget Sector employers, and now reads as follows:

COMMERCIAL AUTHORITIES (self funded Government trading enterprises, including State owned corporations).

Organisations in this category should:

1. Recognise all employee entitlements in the financial period in which they emerge
2. Fully fund superannuation entitlement
3. Meet other employee entitlements on a normal commercial basis from general operating cash flow (ie. no specific funding).

The Budget Papers state that Non-Budget Sector agencies are required to meet the full accrual cost of increases in superannuation liabilities and are required to fully fund past unfunded liabilities over a period of up to 30 years.

4.4 PSS

4.4.1 The PSS is split between the Contributor and Employer Reserves.

4.4.2 The Contributors Reserve operates in a similar way to the SSS Contributor Reserve, being credited with employee contributions and interest and debited at benefit emergence with the actual benefit payment or the transfer to employer reserve in the case of pension or deferred benefits.

4.4.3 The Employer Reserve is credited with employer contributions, transfers from the Contributors' Reserve, and interest at a rate determined by the Trustee. It is debited with benefit payments, expenses and tax. It behaves in the same way as the SSS employer reserve for a Budget-Sector employer, with the Consolidated Fund effectively covering the shortfall between benefits emerging and the total of Employer and Contributor reserves.

4.5 General Government Liability Management Fund (GGLMF)

- 4.5.1 The GGLMF is part of the Consolidated Fund, ie it is not part of the Pooled Fund. Nevertheless, the relevant legislation essentially guarantees that monies paid into the GGLMF will eventually be paid to the Pooled Fund whilst ever an unfunded liability exists in the Pooled Fund. It exists as a temporary repository for advance superannuation funding in respect of Budget Sector liabilities.

4.6 Pacific National

- 4.6.1 As at 21 February 2002 the authority FreightCorp was sold by the NSW Government, and is currently trading under the name of Pacific National.

As part of the terms of the sale, employees who were members of the Pooled Fund were permitted to retain their membership in the Pooled Fund.

- 4.6.2 In respect of the actuarial investigation, there are two special features that apply to Pacific National:
- (i) the actuarial basis includes a rate of 7.3% per annum for the investment return, and Pacific National specific redundancy assumptions are incorporated;
 - (ii) there is a specific funding plan in place.



5

5. Valuation Process and Valuation Basis

This section explains the assumptions used for each of the Schemes for valuing the liabilities. All of the assumptions are set out in detail in Volume II of this report.

5.1 Valuation Process

5.1.1 The actuarial valuation process has a number of stages as follows:

Stage 1

Assumptions are made about the future, based on the past experience of superannuation funds generally and on the recent past experience of each Scheme. This aspect is discussed in the remaining paragraphs of this section and the complete basis is set out in Volume II.

Stage 2

Using these assumptions, the future money flow into and out of the Scheme year by year is calculated until the last of the contributors and pensioners as at 30 June 2006 leaves the Scheme.

Stage 3

The cash flows are discounted to capital values at the valuation date.

5.1.2 Consistency of Assumptions across Schemes

The assumptions about rates of future investment return were set the same for all Schemes in the Pooled Fund as the same investment pool has been used and since the term of the outstanding liabilities is sufficiently similar. Similarly, assumptions about rates of inflation and rates of inflationary salary increases were set the same for all Schemes.

Other assumptions (mainly rates of decrement and rates of promotional salary increase) have been set independently to reflect the underlying experience of the membership of each Scheme. However, we have ensured that all Schemes have been treated in a consistent manner.

5.2 Economic Assumptions

5.2.1 Background

In the actuarial basis used to value the Schemes' benefits the three economic assumptions are the rate of investment return, the rate of salary increase and the rate of inflation. The excess of the rate of investment return over the rate of inflation is more important than the absolute values of those two items; and this gap is the most significant element of the actuarial basis. In addition the rate of investment return less the rate of salary increase is very important.

As set out in Section 3, the compound average rate of return over the 3 year period to 30 June 2006 was 14.1% pa. This compares with the rate of 7% pa assumed in the previous valuation.

In setting the economic assumptions advice was sought from NSW Treasury, Access Economics, Intech, JANA and Mercer Investment Consulting. The assumptions arrived at have also been based on professional actuarial judgement.

5.2.2 Rate of increase in the Consumer Price Index (CPI)

The CPI increase rate has been set at 2.5% per annum. This rate was set based on the following considerations.

- The majority of the organisations consulted estimated a long term CPI increase of 2.5% pa.
- The Reserve Bank target for CPI is 2% to 3% pa.
- The average CPI increase rate for the ten years to 30 June 2006 is 2.6% pa. Since the early 1990's the average increase in CPI has been 2.5% pa.
- The World Bank has forecast global inflation to 2015 to average under 3% pa.

As at 30 June 2006 it appeared that inflationary pressures were increasing (in the June quarter, the margin between ten year sovereign market yields and indexed bonds averaged 3.2% per annum). However for this investigation it was decided to regard such pressures as short term, and not likely to affect the long term average.

5.2.3 Rate of increase salary

The salary increase rate has been set at 4.0% per annum.

This rate is consistent with the advice received from the organisations that we have consulted.

Since the early 1990s wage inflation increases have ranged from 2% per annum to 6% per annum, with an average just above 4% per annum. Moreover the margin of AWOTE over CPI has averaged 1.6% per annum over this period, which coincides with the inflation target range framework being used by the Reserve Bank of Australia. Taking into account both nominal and real approaches, an expectation for general salary increases of 4.0% per annum continues to be appropriate.

External to this investigation certain projections have been carried out in respect of the State sector, where salaries have been assumed to increase at 4% per annum to 30 June 2008 and 3.5% per annum thereafter. However these projections were set in a “whole of government” context and take into account overall workforce planning initiatives. By numbers, the contributors to the Pooled Fund are a relatively small and decreasing proportion of the total NSW public sector workforce. It is quite possible that this subset will experience different salary increases to the NSW Public Sector workforce as a whole.

Nevertheless, one of the sensitivities investigated is the effect of salary increases of 4% per annum for two years, and 3.5% per annum thereafter.

5.2.4 **Rate of investment return**

The rate of investment return has been set at 7.7% per annum for current pensioners and 7.0% per annum for other membership. This is equivalent to an average over all of 7.3% per annum

The first step in the process of determining the rate of investment return assumption is to estimate the future gross earning rate of the fund based on the Trustee’s asset allocation. This is the benchmark asset mix expected to be held on average over the term of the liabilities. This gross return is then adjusted for the effects of tax and expenses.

In respect of tax, the nominal rate of tax is 15%. However for the assets backing the liabilities in respect of non-pensioners, this rate is reduced for the effect of dividend imputation credits and for the fact that capital gains tax is 10% rather than 15%. This reduces the tax rate to approximately 8.5%. However for the assets backing pensioners no tax is assessed because of the exemption from tax on Current Pension Liabilities. When account is taken for dividend imputation, the effective tax rate is approximately negative 5.0%.

In respect of investment expenses, we have assumed a rate of 0.3%, being the rate currently being experienced by the Pooled Fund.

Application of this process to the estimates of the asset advisers resulted in a range of 6.5% to 7.2% for assets backing non-pensioners and 7.2% to 7.9% for assets backing pensioners. To be consistent with the assumption used at the previous investigation (after taking into account the change in tax rates assumed), the rates should be 7.0% for assets backing non-pensioners and 7.7% for assets backing pensioners. These rates have been adopted.

It must be borne in mind that there is considerable volatility from year to year in the rates of investment return actually experienced.

5.2.5 Summary

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

| | |
|---|---|
| Rate of investment return: | 7.0% per annum (non current pensioners) |
| | 7.7% per annum (current pensioners) |
| Rate of general salary escalation: | 4.0% per annum |
| Rate of increase in consumer price index: | 2.5% per annum |

No specific short term assumptions have been adopted.

5.2.6 Sensitivities

To provide an indication of the sensitivity of the valuation results to economic factors seven further sets of calculations were carried out, being an increase of 1% per annum and a decrease of 1% per annum to the rate of investment return, the rate of salary increase and the rate of CPI increase; plus a set of calculations where the rate of salary increase was altered to 3.5% per annum post 30 June 2008.

| Sensitivity Study | Economic Basis |
|---|---|
| Investment Return plus 1% | Standard basis but with investment return increased by 1% |
| Investment Return minus 1% | Standard basis but with investment return decreased by 1% |
| Salary plus 1% | Standard basis but with salary increase rate increased by 1% |
| Salary minus 1% | Standard basis but with salary increase rate increased by 1% |
| CPI plus 1% | Standard basis but with CPI increase rate increased by 1% |
| CPI minus 1% | Standard basis but with CPI increase rate decreased by 1% |
| Rate of salary increase 4.0% per annum to 30 June 2008 and 3.5% per annum thereafter. | This assumption is consistent with assumptions used in certain whole-of-government projections. |

5.2.7 Administration Expenses

In the previous valuation the level of administration expenses assumed for each Scheme were as follows:

| | |
|--------------|--|
| SASS | 2.5% of total contributions assuming that Employer Contributions are twice member contributions. |
| SANCS | 2.5% of 2.5% of salaries |
| SSS | 1.0% of (benefit payments plus total contribution income) assuming that Employer Contributions are twice member contributions. |
| PSS | 0.625% of benefit payments |

The total expenses over the three years for each of the Schemes participating in the Pooled Fund are as follows:

| Three years to 30 June 2006 | Total Pooled Fund \$m |
|---------------------------------------|------------------------------|
| Actual Expenses | 109.0 |
| 2003 actuarial basis expense estimate | 121.9 |

The expense assumptions for SASS and SSS are based on assumed future relationships of levels of member contribution to employer subsidy required. Experience over the recent past has shown that in fact members are paying higher contributions than previously assumed, while not accruing higher employer-financed benefits. Under SASS this occurs when members continue contributing at high rates despite having already accrued maximum benefit points. Under SSS members are not abandoning as many units as expected when levels of member contribution exceed 6% of salary.

To reflect the change in assumed level of future member contributions in SASS and SSS, the expense assumption has been changed to assume employer contributions are 1.5 times member contributions.

If this approach were adopted for the three years to 30 June 2006 then the expense estimate would have been \$110.2 million, which is approximately equal to the actual level of \$109.0 million.

5.2.8 Tax

As in previous actuarial investigations, the utilisation of the PJFCs has not been anticipated.

5.3 Demographic Assumptions

- 5.3.1 A detailed analysis of the experience of the Schemes during the three year period to 30 June 2005 has been carried out to compare the experience with the assumptions made at the previous investigation. In addition comparisons were made for some elements of the basis with the analysis of the experience of the period 1 July 1999 to 30 June 2002.

Rates of exit vary by age and sex as is to be expected. For some types of exit, rates also vary by occupation group. SASS Part 3 forms a different occupation group to Part 1 and experiences different resignation and retirement rates. Rates of early retirement and rates of commutation also vary between Schemes. Members tend to optimise their own benefits.

We have formulated assumptions based on the experience of each of the Schemes. In setting these rates we have adopted realistic rates rather than retaining any margins for conservatism.

The following sections describe how the valuation basis was determined. Volume II contains a detailed specification of the basis.

5.4 Contributor Assumptions

5.4.1 Rates of Salary Increase

The future rates of salary increase assumed comprise two elements:

1. An underlying rate of increase in respect of inflation and general productivity increases. This is dealt with under economic assumptions; and
2. An age-specific promotional increase scale.

Based on the experience in the three years to 30 June 2005 there was no significant difference in promotional rates of salary increase between Schemes, nor was there any significant difference between males and females. The promotional scale adopted is the same as used in the 2003 valuation.

5.4.2 Rates of Resignation

Complete sets of rates of resignations are included in Volume II. The changes from the previous investigation are summarised in the following table:

| | |
|--------------|---|
| SASS | <ul style="list-style-type: none"> ➤ Male rates increased for Part 1 at ages over 40 with higher increases (up to 30%) at higher ages; no changes for Part 3. ➤ Female rates for Part 1 slightly reduced for ages over 40 with largest reductions (15-20%) in 45-50 age group; no changes for Part 3. |
| SANCS | ➤ As for SASS |
| SSS | <ul style="list-style-type: none"> ➤ Male cash resignation rates increased for most ages by about 25-30%, reversing decreases for 2003. ➤ Female cash resignation rates for retirement age 60 and 55 reduced for most ages with significant reductions over age 45. |
| PSS | <ul style="list-style-type: none"> ➤ Male rates reduced for ages under 47, continuing the decreases for 2003, increased for higher ages ➤ Female rates reduced by 60% for ages under 47, and increased at higher ages as for males. |

5.4.3 Rates of Deferral

We have analysed the assumed proportions of resigning members who will elect to preserve their benefits rather than take a cash benefit. The rates have been adjusted to reflect experience as follows:

| | |
|--------------|--|
| SASS | ➤ No change in proportions of resignation deferring benefit, but overall levels changed with changes in resignation rates. |
| SANCS | ➤ As for SASS. |
| SSS | ➤ Male rates increased for ages under 40 (many rates doubled) and decreased for ages over 45; females unchanged. |
| PSS | ➤ Rates approximately halved at all ages. |

5.4.4 Rates of Mortality for Contributors

The rates experienced were quite close to those assumed.

The rates used are as follows:

| | |
|----------------------------|---|
| SASS, SANCS and SSS | ➤ Rates equal to 35% of the rates in the Australian Life Tables 2000-02 |
| PSS | ➤ Slightly higher overall mortality rates are assumed as a “killed on duty” decrement is added to the standard rates. The killed on duty rates are unchanged from the previous investigation. |

5.4.5 Rates of Disablement for Contributors

The disablement experience of SASS and SANCS was lower than expected. However, the experience of SSS and PSS was significantly higher than expected.

The rates of disability assumed at this valuation are as follows:

| | |
|--------------|---|
| SASS | <ul style="list-style-type: none"> ➤ Male combined disablement rates reduced to 80% of previous levels for ages under 45 and 75% at higher ages. The proportions incurring partial disablement were retained unchanged. ➤ Female rates reduced to 90% of previous levels for ages under 45 and 70% at higher ages with same partial disablement proportions as males. |
| SANCS | ➤ Rates assumed at SASS combined TPI + PPI rates. |
| SSS | ➤ Male rates increased by 40% over 2003 levels, female rates retained unchanged from 2003. |
| PSS | ➤ Significantly higher rates are incorporated in this valuation. In particular no reversion to a lower level rates of disablement after a “select” period is assumed. For not hurt on duty disablements rates assumed are 40% higher than previously assumed “ultimate” rates. Hurt on duty rates assumed are 40% higher than previously assumed “select” rates. |

5.4.6 Rates of Retirement

The rates were fine-tuned to reflect the experience:

| | |
|--------------|---|
| SASS | ➤ All rates have been reduced reflecting the trend to later retirement. |
| SANCS | ➤ For Part 1, rates have been adjusted to reflect a weighted average of combined SASS & SSS membership. Part 3 as for SASS. |
| SSS | ➤ Male rates and rates for females retiring at age 60 have been reduced; rates for females retiring at age 55 increased. |
| PSS | ➤ Rates have been reduced at all ages to correspond with the experience. |

No allowance has been made for late retirements in PSS. For SSS late retirement rates to age 65 have been retained and in SASS and SANCS late retirement rates to age 70 are adopted.

5.4.7 Rates of Redundancy

The single largest factor in the experience affecting redundancies was the employer group, with Part 3 type employers under SASS experiencing the lowest rates. All groups also consistently experienced the highest rates in the year 2004-2005 and lowest in 2003-2004.

For SASS Part 1, an allowance for 1.5% of members per annum to be made redundant was incorporated into the basis in 2003. This has been retained. No allowance in other groups has been made

5.4.8 Future Contribution Rates

For previous investigations SASS contributors have been assumed to maintain their current contribution rate through to retirement, unless they reach maximum benefit points, when their contribution rate reduces to 1%. Experience has shown that about 70% of members in fact do not reduce their contribution on attaining maximum points. Accordingly for this valuation we have assumed that 30% of members reduce their contribution to 1% on attaining maximum points and the remainder maintain their current contribution to retirement.

Rates of taking up optional units in SSS have also been modified to reflect higher contribution rates since the previous investigation. (Optional units are those units for which contributions in excess of 6% salary required.)

5.4.9 Distribution of New Entrants

The Scheme is closed to new entrants and a distribution of new entrants is only used to derive theoretical contribution rates. The distribution used is the same as used for previous investigations and is set out in Volume II.

5.5 Pensioner Assumptions

5.5.1 Pensioner Mortality

Mortality rates directly related to those in the Australian Life Tables 2000-02 were adopted for all pensioners. The experience showed a continuing trend of improvement in mortality and this has been reflected by the adoption of the (smoothed) ABS adjustments for future improvements for years 2006 and onwards in the mortality rates for all pensioners.

| | |
|-------------|--|
| SASS | ➤ Based on experience the overall pensioner and spouse mortality has been retained at a similar level to the previous valuation, with rates adjusted at individual ages to a smooth proportion of the rates in the Australian Life Tables 2000-02. |
| SSS | ➤ Rates were adjusted to a proportion of the rates in Australian Life Tables 2000-02. This resulted in small increases in mortality for ages 55-70 and reductions at all other ages for normal male pensioners and increases at all ages for females. Mortality rates for male ill-health pensioners were reduced for ages under 65 and increased for over 65, while female rates reduced at all ages except 50-65 where there was a 20% increase. |
| PSS | ➤ A proportion of the rates assumed SSS are adopted, where the proportion is 115% for normal pensioners, 100% for not hurt on duty disability pensioners and 50-80% of SSS disability pensioner mortality (depending on age) for hurt on duty pensioners. |

5.5.2 Proportion of Members Taking Pension Benefits & the proportion with Spouse and Dependants

The proportion of members electing to take pension benefits over lump sums when an election is available has increased in all Schemes over the 3 year period. The assumed proportions commuting pensions (or taking lump sums) have been reduced for all Schemes for most types of pension.

For SASS, the proportion of members electing pension benefit of those eligible has been increased from 5% to 15%.

Commutation assumed for SSS has been reduced from 20% to 15% for retiring members with corresponding reductions for other types of pension.

For PSS, the proportion of members electing pension benefit of those eligible has been retained at 27.5%.

Assumptions as to proportions of contributors and pensioners married, age of spouse and the number and ages of children have been retained from the previous valuation for all but SSS retirement pensioners.

Lower proportions than previously assumed of pensioners with eligible spouse surviving at death have been experienced in SSS. The proportions were reduced by

10% for males, 20% for females for retirement pensioners. The ages of spouses of SSS pensioners were also adjusted to reflect experience: a female spouse is assumed three years younger than the male pensioner, a male spouse two years older than the female pensioner.

5.6 Assets and Funding Indices

5.6.1 Valuation of Assets

Accounting standards that govern the financial statements of superannuation funds in Australia require that assets be recorded at net market value; that is the market value of the asset at the valuation date less any costs of realisation.

For the purposes of the actuarial valuation it is essential that the assets and liabilities are valued on a consistent basis. Hence the liabilities have been valued at market rates of investment return to match the market value approach of the assets.

5.6.2 Funding Indices

Three indices have been calculated whose progress from investigation to investigation provides an indication of comparative financial strength.

The indices calculated are:

Vested benefits index: the ratio of assets to vested benefits where a member's vested benefit is the amount he/she is entitled to as a cash benefit from the Scheme if he/she voluntarily leaves an employer at the investigation date.

Deferred benefits index: the ratio of assets to deferred benefits where a member's deferred benefit is the amount he/she is entitled to preserve in the Scheme if he/she voluntarily leaves an employer at the investigation date.

Accrued benefits index: the ratio of assets to accrued benefits where a member's accrued benefits are based on his/her service and contributions to the investigation date and on estimated final average salary.

6

6. Results of Valuation of Pooled Fund

This section sets out the results of the valuation for each of the Schemes forming the Pooled Fund. In respect of SASS and SANCS the results are subdivided according to the type of employer (as defined by legislation which specifies Part 1 and 3 employers). Each section details the unfunded liability for the Scheme or Scheme sub-division and the theoretical contribution rate required to cover the outstanding liability.

6.1 SASS

6.1.1 Part 1 Employer's Reserve Unfunded Liability

Unfunded liability is defined as the value of accrued benefits less available reserves. The unfunded liability in the Part 1 Employer's reserve for accrued benefits is set out below. The GGLMF is excluded in the table below.

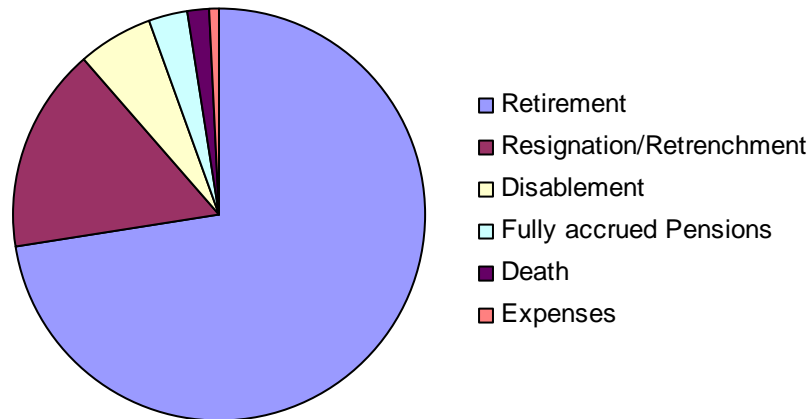
| SASS Part 1 Employers | | |
|--|------------|------------|
| | \$m | \$m |
| Present value of benefits (fully accrued) payable to existing pensioners | | |
| • pensions in course of payment | 161.1 | |
| • reversionary pensions | 18.5 | |
| | | 179.6 |
| Plus | | |
| Present value of benefits payable in future to contributors in respect of service prior to the valuation date: | | |
| • male contributors | | 2,680.9 |
| • female contributors | | 1,544.8 |
| Less | | |
| Amount of fund (excluding GGLMF) | | 2,774.5 |
| Gives | | |
| Unfunded past service liability | | 1,630.9 |

This balance sheet is an aggregate for all Part 1 employers.

If the valuation assumptions of the 2003 investigation had been retained, then the unfunded liability would have been \$1,701.9 million rather than \$1,630.9 million.

The pie chart below shows the allocation, on the valuation assumptions, of the total employer liability between members resigning in future, retiring, becoming disabled or dying, as well as expenses of management.

Allocation of Total Employer Liability



6.1.2 Part 1 Employer's Financial Progress

The SASS investigation as at 30 June 2003 revealed an unfunded past service liability in the Part 1 Employers' Reserve of \$2,726.4 million, whereas this investigation has shown an unfunded liability of \$1,630.9 million as at 30 June 2006. The method used to analyse the change in unfunded liability is to assess the effect of differences between the assumptions made at the previous valuation and the actual experience of the inter-investigation period. The major effects on the unfunded past service liability have been:

- Rates of investment earnings were higher than expected, reducing the deficiency;
- Rates of salary increase were higher than expected, increasing the deficiency;
- In respect of exits later retirements and fewer exits overall gave rise to a surplus;
- Contributions paid were lower than the increment in past service liability due to service over the 3 years. (The low contributions were due to the incidence of Crown contributions. Note that the effect of the GGLMF is excluded from this analysis);
- On 19 September 2005 Crown employer reserves were reallocated across Schemes. \$1,700 million was transferred from the SSS employer reserve to the SASS Part 1 employer reserve.

- Following analysis of the experience, the valuation basis was altered. The combined effect of capitalising the future gains and losses due to the differences between the two bases resulted in a decrease in the current liability. The major factors in the basis change affecting the magnitude of the decrease are the later retirement rates, increased proportions assumed to elect pensions and the discount rate used for pensioners.

Set out below is a summary of the progress of the unfunded liability, showing the estimated financial effect of the major items:

| SASS Part 1 Employers | |
|---|------------|
| Item | \$m |
| Unfunded past service liability as at 30 June 2003 | 2,726.4 |
| plus interest to 30 June 2006 at old valuation rate | 613.6 |
| Surplus due to higher than expected investment earnings | -391.9 |
| Deficiency due to higher than expected salary increases | 217.7 |
| Exits - surplus due to late retirements & fewer exits | -4.5 |
| Shortfall of contributions below accrual | 305.0 |
| Crown employer reserve reallocation (plus interest) | -1,793.5 |
| Change in valuation basis at 30 June 2006 | -71.0 |
| Other sources and rounding | 29.1 |
| Unfunded liability at 30 June 2006 | 1,630.9 |

6.1.3 Part 1 Employers Total Liabilities including benefits and contributions in respect of future service

The valuation balance sheet as at 30 June 2006 for the Part 1 Employer's reserve excluding GGLMF is set out below, taking into account total service benefits as well as expected future contributions, expenses and taxes.

| SASS Part 1 Employers | | |
|--|--------------|------------|
| | \$m | \$m |
| Present value of benefits (fully accrued) payable to existing pensioners | Total | |
| • pensions in course of payment | 161.1 | |
| • reversionary pensions | 18.5 | |
| | | 179.6 |
| Plus | | |
| Present value of benefits payable in future to current contributors in respect of service prior to the valuation date: | | |
| • male contributors | | 2,680.9 |
| • female contributors | | 1,544.8 |
| Present value of benefits payable in future to current contributors in respect of future service: | | |
| • male contributors | | 881.2 |
| • female contributors | | 744.0 |
| Plus | | |
| Present value of future expenses of management | | 43.9 |
| Less | | |
| Amount of fund (excluding GGLMF) | | 2,774.5 |
| Gives | | |
| Amount to be funded by employer contributions | | 3,300.0 |

6.1.4 Part 1 Employers – Theoretical Contribution Rate

If the Part 1 Employers taken as a whole had always contributed to employer reserves on a basis to fully fund benefits over the full service of members, the theoretical ratios of employer to contributor contributions, based on the age and sex distribution of entrants for Part 1 employers, would be:

| | |
|------------------|------|
| Males | 1.78 |
| Females | 1.85 |
| All contributors | 1.81 |

The reduction in the ratio from the 1.93 calculated at the previous investigation reflects the later retirement rates adopted at this investigation.

Taking into account past underfunding we have calculated the Aggregate Contribution Ratio required from 1 July 2006 to fully fund Part 1 employers' liabilities over the future contributory membership of current members ignoring the effect of the GGLMF. The ratio for all Part 1 employers combined is 3.22 times contributors' contributions. The equivalent level percentage salary contribution is 18.1% of Part 1 contributory members' salaries. The aggregate contribution ratios expected to be required for individual employer groups to fully fund contributors in force as at 30 June 2006 are provided in a separate report.

6.1.5 Part 1 Employer's Reserve – Indices and Financial Strength

The sum of cash vested benefits, deferred benefits and accrued benefits (as defined in Section 5 above) for each Part 1 Employer group are provided outside this report. Where employers are funding benefits in advance, the funding indices, i.e. the ratio of assets to these sums, may be used in future comparisons to monitor relative financial strength.

6.1.6 Part 3 Employer's Reserve – Unfunded Liability

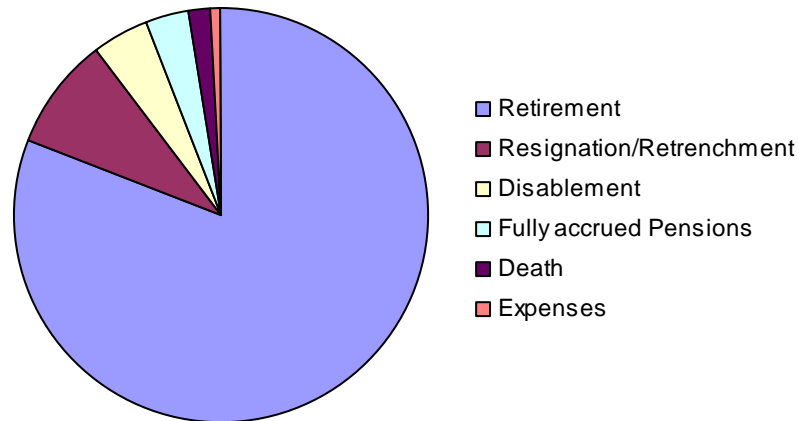
The unfunded liability in the Part 3 Employer's reserve for accrued benefits is set out below.

| SASS Part 3 Employers | | |
|--|------------|------------|
| | \$m | \$m |
| Present value of benefits (fully accrued) payable to existing pensioners | | |
| • pensions in course of payment | 69.6 | |
| • reversionary pensions | 9.6 | |
| | | 79.2 |
| Plus | | |
| Present value of benefits payable in future to current contributors in respect of service prior to the valuation date: | | |
| • male contributors | | 626.3 |
| • female contributors | | 1,036.1 |
| Less | | |
| Amount of fund (excluding GGLMF) | | 284.5 |
| Gives | | |
| Unfunded past service liability | | 1,457.1 |

If the valuation assumptions of the 2003 investigation had been retained, then the unfunded liability would have been \$1,496.1 million rather than \$1,457.1 million.

The pie chart below shows the allocation, on the valuation assumptions, of the total employer liability between members resigning in future, retiring, becoming disabled or dying, as well as expenses of management.

Allocation of Total Employer Liability



6.1.7 Part 3 Employer's Reserve – Financial Progress

The SASS investigation as at 30 June 2003 revealed an unfunded liability in the Part 3 Employers' Reserve of \$895.5 million. This has now increased to \$1,457.1 million. The major causes are discussed below:

- Rates of investment earnings were higher than expected, reducing the deficiency;
- Rates of salary increase were higher than expected, increasing the deficiency;
- In respect of exits, lower than expected exits resulted in a small surplus as most benefits are higher than the reserve.
- Actual contributions paid were less than accrual of benefit over the period. As Part 3 forms part of the Budget-funded group of employers, the operation of the GGLMF has resulted in no contributions being paid to the Part 3 Employers' Reserve. (Note that the GGLMF is excluded from the reserves for this analysis.)
- Following analysis of the experience, the valuation basis was altered. The combined effect of capitalising the future gains and losses due to the differences between the two bases resulted in a small decrease in the current deficiency.

Set out below is a summary of the estimated financial effect of the major items contributing to the progress of the deficiency:

| SASS Part 3 Employers | |
|---|------------|
| Item | \$m |
| Unfunded liability as at 30 June 2003 | 895.5 |
| plus interest to 30 June 2006 at old valuation rate | 201.5 |
| Surplus due to higher than expected investment earnings | -73.6 |
| Deficiency due to higher than expected salary increases | 151.7 |
| Exits | -1.9 |
| Deficiency due to actual contribution falling short of benefits accrued over period | 332.4 |
| Change in valuation basis at 30 June 2006 | -39.0 |
| Other sources and rounding | -9.5 |
| Deficiency at 30 June 2006 | 1,457.1 |

6.1.8 Part 3 Employer's Reserve – Valuation Balance Sheet including benefits and contributions in respect of future service

| SASS Part 3 Employers | | |
|--|------------|------------|
| | \$m | \$m |
| Present value of benefits (fully accrued) payable to existing pensioners | | |
| • pensions in course of payment | 69.6 | |
| • reversionary pensions | 9.6 | |
| | | 79.2 |
| Plus | | |
| Present value of benefits payable in future to current contributors in respect of service prior to the valuation date: | | |
| • male contributors | | 626.3 |
| • female contributors | | 1,036.1 |
| Present value of benefits payable in future to current contributors in respect of future service: | | |
| • male contributors | | 223.8 |
| • female contributors | | 444.8 |
| Plus | | |
| Present value of future expenses of management | | 17.5 |
| Less | | |
| Present value of future contributions by employers at 1.0 times employee contributions, reduced for contributions tax | | 422.8 |
| Less | | |
| Amount of fund (excluding GGLMF) | | 284.5 |
| Gives | | |
| Deficiency | | 1,720.4 |

Note that the amount of the deficiency includes the capitalisation of future employer contributions of 1.0 times employee contributions; and it is known that these contributions are not adequate.

If the Part 3 employers had always contributed to the employer reserve on a basis to fully fund benefits, the theoretical ratios of employer contributions to contributors' contributions on the long term valuation basis and assumed distribution of new entrants are:

| | |
|------------------|------|
| Males | 1.69 |
| Females | 1.69 |
| All contributors | 1.69 |

The decrease in the ratio from the 1.78 calculated at the previous investigation reflects the lower retirement rates adopted at this investigation.

The Aggregate Contribution Ratio required, ie the ratio which if payable over the remaining contributory service of current members will, together with the current assets, be sufficient to fully provide benefits and future expenses, as well as tax, is 5.32 times contributors' contributions ignoring the GGLMF. The equivalent level percentage salary contribution is 32.9% of Part 3 contributory members' salaries.

6.1.9 Part 3 Employer's Reserve – Projection of Scheme

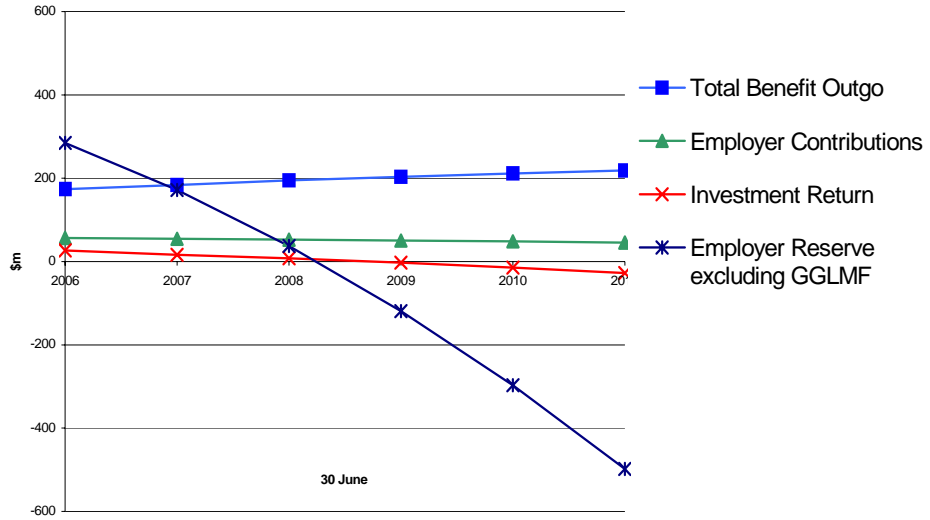
A projection of the Part 3 Employers' Reserve in the Scheme was carried out using the valuation assumptions as set out in Volume II, and assuming that employers contribute at 1.0 times contributions made by contributors and ignoring the GGLMF.

The projection shows that on this basis the Part 3 Employers' Reserve is expected to be exhausted after about 2¼ years. Cash vested benefits already exceed the reserve.

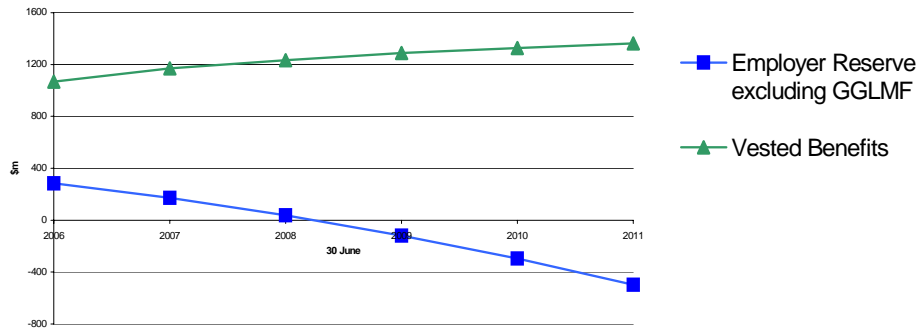
This result represents a worsening of the position at 30 June 2003, when the projection indicated that the reserve would be exhausted after 6 years from the current valuation date. This deterioration is a result of the unfavourable experience in the inter-investigation period in particular non-payment of employer contributions.

The details of our projections are set out in the following graphs:

SASS - Part 3 Expected Benefits and Reserves



SASS - Part 3 Expected Progress of Employer Reserve & Vested Benefits



6.1.10 Part 3 Employers' Reserve - Indices

Vested Benefits

The sum of vested benefits (as defined in Section 5 above) for contributors in the Part 3 Employers' Reserve amounted to \$988.0 million as at 30 June 2006. Assets available to cover employer liabilities after fully covering benefits due to current pensioners are \$205.4 million excluding the GGLMF. Therefore the ratio of assets to vested benefits is \$205.4million/\$988.0million, ie 0.21.

The progress of this index over successive investigations has been:

| | | |
|---------------|--------|------|
| 31 March 1981 | (LGPF) | 2.75 |
| 31 March 1984 | (LGPF) | 3.76 |
| 31 March 1986 | (PASS) | 3.55 |
| 31 March 1988 | (PASS) | 3.23 |
| 1 April 1988 | (SASS) | 2.65 |
| 31 March 1991 | (SASS) | 1.98 |
| 30 June 1994 | (SASS) | 1.93 |
| 30 June 1997 | (SASS) | 1.83 |
| 30 June 2000 | (SASS) | 1.41 |
| 30 June 2003 | (SASS) | 0.67 |
| 30 June 2006 | (SASS) | 0.21 |

The decline in the vested benefits index reflects the underfunding, as well as exclusion of the GGLMF.

Deferred Benefits

The sum of deferred benefits (as defined in Section 5 above) for contributors in the Part 3 Employers' Reserve amounted to \$1,993.5million as at 30 June 2006. Therefore the ratio of assets to deferred benefits is \$205.4million/\$1,993.5million, ie 0.10.

The progress of this index over recent investigations has been:

| | | |
|--------------|--------|------|
| 30 June 1994 | (SASS) | 0.55 |
| 30 June 1997 | (SASS) | 0.58 |
| 30 June 2000 | (SASS) | 0.54 |
| 30 June 2003 | (SASS) | 0.27 |
| 30 June 2006 | (SASS) | 0.10 |

Accrued Benefits

The sum of the accrued benefits (as defined in Section 5 above) for contributors in the Part 3 Employers' Reserve amounted to \$2,102.2million as at 30 June 2006. Therefore the ratio of assets to accrued benefits is \$205.4million/\$2,102.2million, ie 0.10.

The progress of this index over successive investigations has been:

| | | |
|---------------|--------|------|
| 31 March 1981 | (LGPF) | 0.53 |
| 31 March 1984 | (LGPF) | 0.67 |
| 31 March 1986 | (PASS) | 0.64 |
| 31 March 1988 | (PASS) | 0.74 |
| 1 April 1988 | (SASS) | 0.73 |
| 31 March 1991 | (SASS) | 0.59 |
| 30 June 1994 | (SASS) | 0.48 |
| 30 June 1997 | (SASS) | 0.53 |
| 30 June 2000 | (SASS) | 0.49 |
| 30 June 2003 | (SASS) | 0.26 |
| 30 June 2006 | (SASS) | 0.10 |

The level of these indices confirms the under-funding of benefits in the Part 3 Employers' Reserve as well as the exclusion of the GGLMF.

6.1.11 Sensitivity Tests - Combined employer reserves

In order to test the sensitivity of the results of the valuation to the economic assumptions made, the effect on the unfunded liability of varying each factor by plus or minus 1% was calculated. The alternative bases used were:

- a) Earned interest rate +1% (long term rate 8/8.7%p.a.)
- b) Earned interest rate -1% (long term rate 6/6.7%p.a.)
- c) Inflationary salary increases +% (long term rate 5%)
- d) Inflationary salary increases -1% (long term rate 3%)
- e) CPI increases +1% (long term rate 3.5%)
- f) CPI increases -1% (long term rate 1.5%)
- g) Rate of salary increase 4.0% per annum to 30 June 2008 and 3.5% per annum thereafter

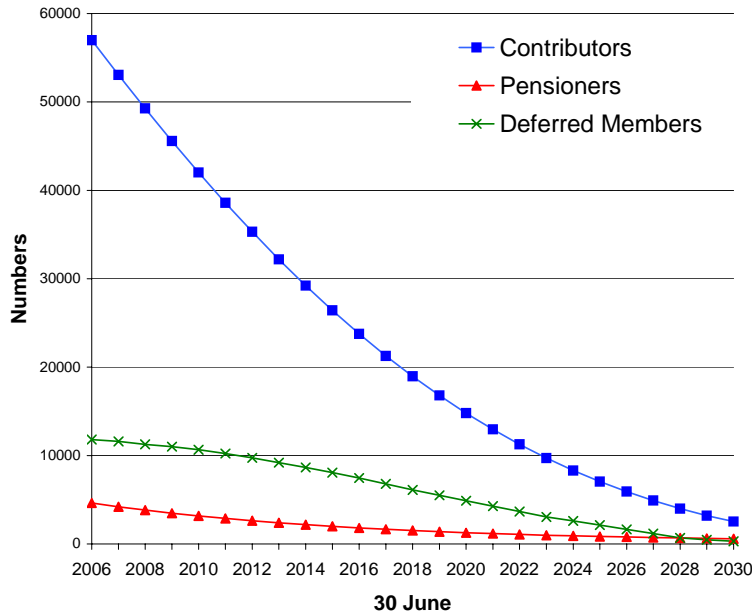
The table below shows the unfunded liability in the Employers' Reserve under SASS as at 30 June 2006 under each of the above assumptions excluding GGLMF.

| Assumptions | | Employer Unfunded Liability \$m |
|--------------------|---|--|
| Valuation basis | | 3,088.0 |
| a) | +1% interest | 2,627.9 |
| b) | -1% interest | 3,622.4 |
| c) | +1% salary increase | 3,564.2 |
| d) | -1% salary increase | 2,666.0 |
| e) | +1% CPI increase | 3,146.6 |
| f) | -1% CPI increase | 3,038.0 |
| g) | Rates of salary increase 4.0% per annum to 30 June 2008 and 3.5% per annum thereafter | 2,922.5 |

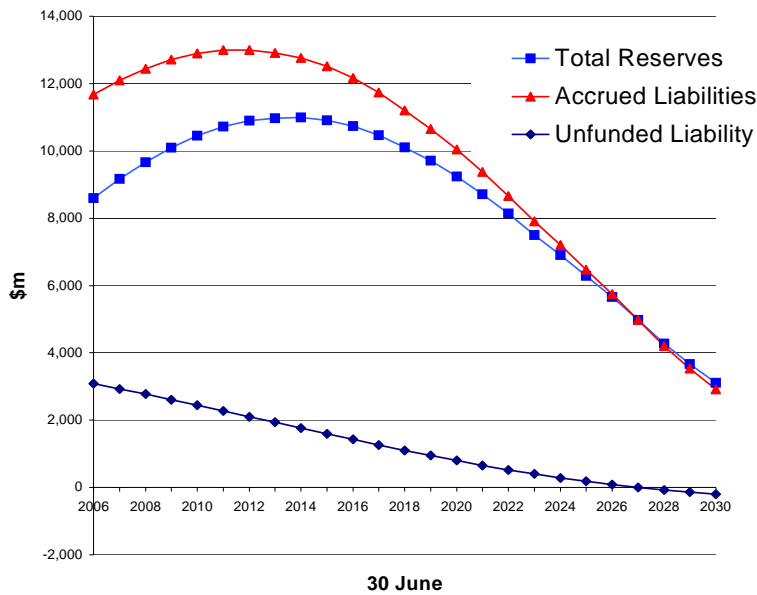
6.2 Projections - Total SASS Scheme

A projection of the Scheme was carried out using the valuation assumptions as set out in Volume II, and assuming that employers contribute at the aggregate recommended contribution rates. (Note that the funding strategy used for these projections is different to the overall funding strategy as set out in Section 6.9).

Total SASS Scheme - Projected Numbers of Contributors, Deferred Benefit Holders and Pensions Payable



SASS Projected Reserves excluding GGLMF, Accrued Liabilities and Unfunded Liability



6.3 SANCS - Employers' Reserves

6.3.1 Part 1 Employers' Reserves – Unfunded Liability

The unfunded past service liability for the Part 1 Employers taken as a whole is set out below.

| SANCS Part 1 Employers | |
|--|------------|
| | \$m |
| Present value of benefits payable in future to contributors in respect of service prior to the valuation date ¹ | |
| • male contributors | 1,130.4 |
| • female contributors | 610.8 |
| Less | |
| Amount of fund (excluding GGLMF) | 638.8 |
| Gives | |
| Unfunded past service liability | 1,102.4 |

¹ This figure includes the top-up benefit for Superannuation Guarantee requirements.

If the valuation assumptions of the 2003 investigation had been retained, then the unfunded liability would have been \$1,135.7 million rather than \$1,102.4 million.

6.3.2 Part 1 Employers - Theoretical Contribution Rate

If the Part 1 employers taken as a whole had always contributed to the scheme on a basis to fully fund benefits, ie comparable to Part 3 employers, the theoretical rate of employer contribution, based on the past age and sex distribution of entrants for Part 1 employers and on the current actuarial basis, would be 2.4% of members' salaries.

Taking into account past underfunding and excluding the GGLMF we have calculated the Aggregate Contribution Rate required over the future working life-time of current members to fully fund (after taking into account existing assets) all benefits, expenses and tax payable in the future. The rate for all Part 1 employers combined is 6.1% of members' salaries.

6.3.3 Part 1 Employers - Superannuation Guarantee Costs

When a contributor ceases service, the total benefit payable from SANCS and the associated fund (SASS, SSS or PSS) is compared with the minimum benefit payable under the Superannuation Guarantee legislation (refer Volume II). If there is a shortfall the difference is made up from the SANCS reserves.

The present value of the total liability for top-up payments in respect of members employed by Part 1 employers is:

| In respect of members who also contribute to : | \$m |
|--|------|
| SASS | 62.2 |
| SSS | 0.1 |
| PSS | 1.7 |

The total top-up represents a contribution averaged over all Part 1 employers of 0.1% of members' salaries.

Note that the unfunded past service liability in section 6.3.1 as well as the aggregate contribution rate, include allowances for these SG costs.

Also note that the value of the top-up liability is very sensitive to the assumptions made, as it is the difference between two larger amounts which can vary.

6.3.4 Part 1 Employers' Reserve - Financial Progress

The SANCS investigation as at 30 June 2003 revealed an unfunded liability in the Part 1 Employers' Reserve of \$1,375.8 million. The main reasons for the decrease in this liability to \$1,102.4 million at 30 June 2006 are set out below. The method used is to assess the effect of differences between the assumptions made at the previous valuation and the actual experience of the inter-investigation period.

- Rates of investment earnings were higher than expected, reducing the deficiency;
- Rates of salary increase were higher than expected, increasing the deficiency;
- There were slightly more exits than expected. All excess exits give rise to a deficiency as the accrued benefit is higher than the reserves held;
- Contributions actually paid were less than the rate of accrual of benefit, due to operation of the GGLMF in respect of Crown contributions; (Note that the GGLMF is excluded from the reserves for this analysis.);
- On 19 September 2005 Crown employer reserves were reallocated across Schemes. \$800 million was transferred from the SSS employer reserve to the SANCS Part 1 employer reserve;
- Following analysis of the experience, the valuation basis was altered. The combined effect of capitalising the future gains and losses due to the differences between the two bases resulted in a decrease in the current unfunded liability.

Set out below is a summary of the progress of the unfunded liability, showing the estimated financial effect of the major items:

| SANCS Part 1 Employers | |
|---|------------|
| Item | \$m |
| Unfunded liability as at 30 June 2003 | 1,375.8 |
| plus interest to 30 June 2006 at valuation rate | 309.6 |
| Surplus due to higher than expected investment earnings | -24.9 |
| Deficiency due to higher than expected salary increases | 95.2 |
| Exits | 0.6 |
| Shortfall of contributions compared to benefit accrual | 203.9 |
| Crown employer reserve reallocation (plus interest) | -844.0 |
| Change in valuation basis at 30 June 2006 | -33.3 |
| Other sources and rounding | 19.5 |
| Unfunded liability at 30 June 2006 | 1,102.4 |

6.3.5 Part 3 Employers' Reserve – Unfunded Liability

The unfunded past service liability for the Part 3 Employers is set out below.

| SANCS Part 3 Employers | |
|--|------------|
| | \$m |
| Present value of benefits payable in future to contributors in respect of service prior to the valuation date ¹ | |
| • Male contributors | 120.4 |
| • female contributors | 233.0 |
| Less | |
| Amount of fund (excluding GGLMF) | 223.9 |
| Gives | |
| Unfunded past service liability | 129.5 |

¹ This figure includes the top-up benefit for Superannuation Guarantee requirements.

If the valuation assumptions of the 2003 investigation had been retained, then the unfunded liability would have been \$136.5 million rather than \$129.5 million.

6.3.6 Part 3 Employers' Reserve - Financial Progress

The SANCS investigation as at 30 June 2003 revealed a deficiency in the Part 3 Employers' Reserve unfunded liability of \$74.9 million. The main reasons for the increase in this deficiency to \$129.5 million at 30 June 2006 are set out below.

- Rates of investment earnings were higher than expected, reducing the deficiency;
- Rates of salary increase were higher than expected, increasing the deficiency;
- As the accrued benefit is higher than the reserves held a surplus arises due to fewer than expected exits;

- The Part 3 Employers' Reserve received no contributions during the period as it constitutes a Crown employer. Thus the entire accrual plus expenses less tax credit is an addition to the unfunded liability; (Note that the GGLMF is excluded from the reserves for this analysis.);
- Following analysis of the experience, the valuation basis was altered. The combined effect of capitalising the future gains and losses due to the differences between the two bases resulted in a small surplus.

Set out below is a summary of the progress of the unfunded liability, showing the estimated financial effect of the major items:

| SANCS Part 3 Employers | |
|---|------------|
| Item | \$m |
| Unfunded liability as at 30 June 2003 | 74.9 |
| plus interest to 30 June 2006 at the valuation rate | 16.9 |
| Surplus due to higher than expected investment earnings | -69.7 |
| Deficiency due to higher than expected salary increases | 32.3 |
| Exits | -1.1 |
| Contributions shortfall | 75.3 |
| Change in valuation basis at 30 June 2006 | -7.0 |
| Other sources and rounding | 7.9 |
| Deficiency at 30 June 2006 | 129.5 |

6.3.7 Part 3 Employers - Valuation Balance Sheet including benefits and contributions in respect of future service

The valuation balance sheet for the Part 3 Employers Reserve is set out below:

| SANCS Part 3 Employers Reserve | |
|---|------------|
| Value of benefits payable in future to current contributors in respect of service prior to the valuation date*: | \$m |
| • male contributors | 120.4 |
| • female contributors | 233.0 |
| Plus | |
| Present value of benefits payable in future to current contributors in respect of future service*: | |
| • male contributors | 59.8 |
| • female contributors | 109.9 |
| Plus | |
| Present value of future expenses of management | 4.6 |
| Less | |
| Present value of future contributions by employers at 2.5% of members' salaries, reduced for contributions tax | 158.4 |
| Less | |
| Amount of fund (excluding GGLMF) | 223.9 |
| Gives | |
| Deficiency | 145.5 |

* includes allowance for SG top-up benefits

6.3.8 Part 3 Employers - Contribution Rates

Ignoring the SG top-up benefits (refer Volume II), the theoretical contribution rate required by Part 3 employers to fully fund the benefits, based on the age distribution of past entrants assumed (see Volume II), and the long term actuarial basis is 2.4% of members' salaries.

The Aggregate Contribution Rate is the rate which if payable over the future service of current membership is expected to exactly provide for future benefits and expenses. The aggregate contribution rate thus recognises the effect of experience variations on both the expected future contributions and benefits as well as in the past leading to the current funding position.

The Part 3 employers aggregate contribution rate to fully fund benefits is 4.7% of members' salaries. (Note that this rate includes allowance for the SG top-up but excludes the effect of the GGLMF).

6.3.9 Part 3 Employers' Reserve - Index

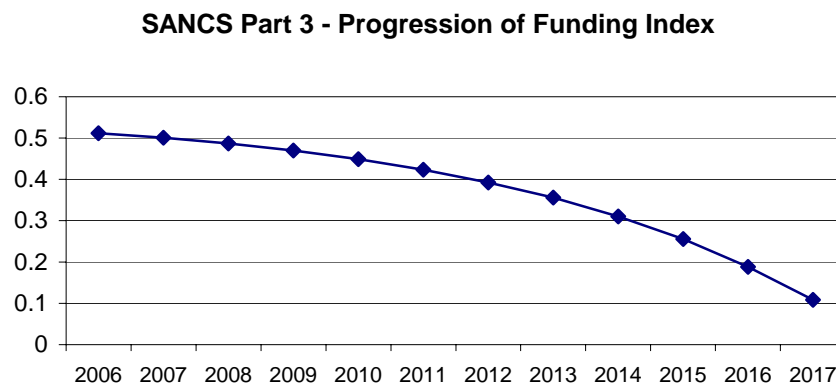
The sum of the accrued benefits (as defined in Section 5 above) for members employed by Part 3 Employers amounted to \$443.3million as at 30 June 2006. Therefore the ratio of assets (excluding GGLMF) to accrued benefits is \$223.9million/\$443.3million ie 0.51.

The progress of this index over successive investigations has been:

| | |
|---------------|------|
| 31 March 1991 | 0.85 |
| 30 June 1994 | 0.76 |
| 30 June 1997 | 0.83 |
| 30 June 2000 | 0.89 |
| 30 June 2003 | 0.74 |
| 30 June 2006 | 0.51 |

Using the future experience assumed under the valuation basis and assuming contributions at 2.5% salaries are made and excluding the effect of the GGLMF, a projection of the cash flows for the Part 3 Employers' Reserve for the 10 years following 30 June 2006 was made and the funding index at each anniversary calculated.

The progress of this index over successive years is shown below:



6.3.10 Sensitivity Tests - Combined employer reserves

In order to test the sensitivity of the results of the valuation to the economic assumptions made, the effect on the unfunded liability of varying each factor by plus or minus 1% was calculated. The alternative bases used were:

- (a) earned interest rate +1% (long term rate 8% p.a)
- (b) earned interest rate -1% (long term rate 6% p.a)
- (c) inflationary salary increases +1% (long term rate 5%)
- (d) inflationary salary increases -1% (long term rate 3%)
- (g) Rate of salary increase 4.0% per annum until 30 June 2008 and 3.5% per annum

(variations in CPI have no effect on SANCS results, so alternatives (e) and (f) are omitted.)

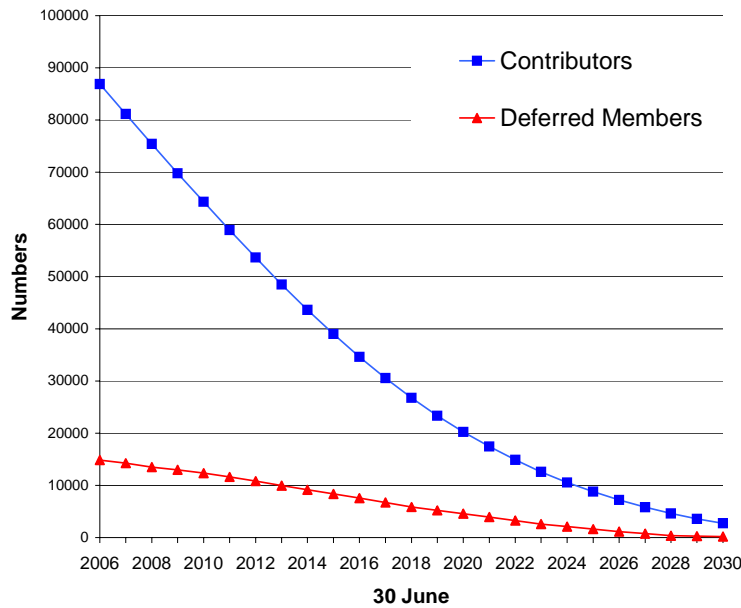
The table below shows the unfunded liability in the Employers' Reserve excluding the GGLMF under SANCS under each of the above assumptions.

| Assumption | | Employer Unfunded Liability \$m |
|-----------------|---|---------------------------------------|
| Valuation basis | | 1,231.9 |
| (a) | +1% interest | 1,083.3 |
| (b) | -1% interest | 1,401.3 |
| (c) | +1% salary increase | 1,402.3 |
| (d) | -1% salary increase | 1,079.9 |
| (g) | Rate of salary increase 4.0% per annum until 30 June 2008 and 3.5% per annum thereafter | 1,172.6 |

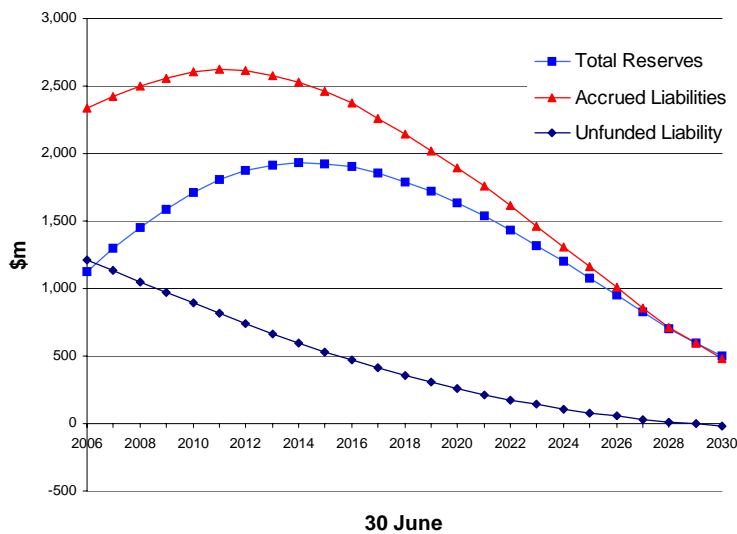
6.4 Projections for SANCS

A projection of the whole Scheme was carried out using the valuation assumptions as set out in Volume II, and assuming that employers contribute at the aggregate recommended contribution rates. (Note that the funding strategy used for these projections is different to the overall funding strategy as set out in Section 6.9).

Total SANCS Scheme - Projected Numbers of Contributors and Deferred Benefit Members



SANCS Projected Reserves excluding GGLMF, Accrued Liabilities and Unfunded Liability



6.5 SSS – Valuation of Liabilities

This section sets out the results for SSS. The valuation of the liabilities includes both Employer and Contributor Reserves but excludes the GGLMF.

6.5.1 Unfunded Liability

The unfunded liability for accrued benefits is set out below.

| SSS | | |
|--|------------|------------|
| | \$m | \$m |
| Present value of benefits (fully accrued) payable to existing pensioners | | |
| • pensions in course of payment | 12,933.2 | |
| • reversionary pensions | 811.0 | |
| | | 13,744.2 |
| Plus | | |
| Present value of benefits (fully accrued) payable to existing deferred members | | 830.6 |
| Plus | | |
| Present value of benefits payable in future to contributors in respect of service prior to the valuation date: | | |
| • male contributors | | 7,987.4 |
| • female contributors | | 3,522.3 |
| Less | | |
| Member Reserve adjustment (refer Volume II) | | 51.8 |
| Amount of fund (excluding GGLMF) | | 17,880.7 |
| Gives | | |
| Unfunded past service liability | | 8,152.1 |

If the valuation assumptions of the 2003 investigation had been retained, then the unfunded liability would have been \$9,560.1 million rather than \$8,152.1 million.

6.5.2 Unfunded Superannuation Liability - Financial Progress

The SSS investigation as at 30 June 2003 revealed an unfunded liability of \$8,099.4 million. The main reasons for the increase in the unfunded liability to \$8,152.1 million at 30 June 2006 are set out below. The method used is to assess the effect of differences between the assumptions made at the previous valuation and the actual experience of the inter-investigation period.

- Rates of investment earnings were higher than expected, reducing the unfunded liability. This effect is compounded as the excess investment earnings on contributor reserves does not correspondingly increase the total liability;
- Rates of salary increase were higher than expected, increasing the deficiency;
- CPI increases in pensions were lower than expected, giving rise to a surplus;

- In respect of exits, lower than expected commutation of pension increased the unfunded liability. Fewer than expected early retirements contributed towards surplus;
- Contributions during the investigation period were lower than the accrual of benefits, due in part to Crown funding strategies. (Note that the GGLMF is excluded from the reserves for this analysis);
- On 19 September 2005 Crown employer reserves were reallocated across Schemes. \$2,500 million was transferred from the SSS employer reserve with \$1,700 million going to SASS and \$800 million to SANCS Part 1 employer reserves;
- Following analysis of the experience, the valuation basis was altered. The combined effect of capitalising the future gains and losses due to the differences between the two bases resulted in a decrease in the liability. The major factors in the basis change affecting the magnitude of the increase are the change in discount rate for pensioners, pensioner mortality and proportions married assumptions and the reduced commutation.

Set out below is a summary of the progress of the unfunded liability, showing the estimated financial effect of the major items:

| SSS | |
|--|------------|
| Item | \$m |
| Unfunded past service liability as at 30 June 2003 | 8,099.4 |
| plus interest to 30 June 2006 at old valuation rate | 1,822.7 |
| Surplus due to higher than expected investment earnings | -4,232.3 |
| Deficiency due to higher than expected salary increases | 820.0 |
| Surplus due to lower than expected CPI increases | -59.8 |
| Exits - deficiency due to lower commutation of pension | 88.1 |
| - surplus due to later retirements | -5.2 |
| Excess of accrual over contributions | 423.3 |
| Crown reserve reallocation to SASS and SANCS (plus interest) | 2,637.5 |
| Change in valuation basis at 30 June 2006 | -1,408.1 |
| Other sources and rounding | -33.5 |
| Unfunded liability at 30 June 2006 | 8,152.1 |

6.5.3 Total Liability including benefits and contributions in respect of future service

The valuation balance sheet as at 30 June 2006 for the State Superannuation Scheme is set out below, taking into account total service benefits as well as expected future contributions, expenses and taxes.

| SSS | | \$m |
|--|----------|----------|
| Present value of benefits (fully accrued) payable to existing pensioners | | |
| • pensions in course of payment | 12,933.2 | |
| • reversionary pensions | 811.0 | |
| | | 13,744.2 |
| Plus | | |
| Present value of benefits (fully accrued) payable to existing deferred members | | 830.6 |
| Plus | | |
| Present value of benefits payable in future to contributors in respect of service prior to the valuation date: | | |
| • male contributors | | 7,987.4 |
| • female contributors | | 3,522.3 |
| Plus | | |
| Present value of benefits payable in future to current contributors in respect of future service: | | |
| • male contributors | | 1,861.2 |
| • female contributors | | 911.3 |
| Plus | | |
| Present value of future expenses of management | | 326.7 |
| Less | | |
| Present value of future contributions by employees | | 1,526.6 |
| Less | | |
| Member Reserve adjustment (refer Volume II) | | 51.8 |
| Amount of fund (excluding GGLMF) | | 17,880.7 |
| Gives | | |
| Amount to be funded by employer contributions | | 9,724.6 |

We have calculated the Aggregate Employer Contribution Rate required over the future working life-time of current contributors to fully fund (after taking into account future employee contributions) all benefits, expenses and taxes arising from future service only. The required contribution is 0.96 times member contributions. Expressed as a level percentage of salary the contribution required is 13.2%.

We have calculated the average employer contribution required over the future working life-time of current members to fund all benefits, expenses and taxes expressed as a level multiple of members own contributions. The multiple is 7.3 times members' contributions. (No account is taken of any reduction in the tax due to PJFC credits nor of the effect of the GGLMF.) Expressed as a level percentage of salary the contribution required is 99.3% contributory members' salaries.

6.5.4 Funding Indices

Assets, excluding GGLMF available for employer liabilities after fully covering benefits due to current pensioners and deferred members amount to -\$1,716.0 million.

Vested benefits are the benefits payable on immediate withdrawal from the scheme, ie normal or early retirement benefit if eligible or else the resignation benefit. The benefit may be taken as an immediate benefit or as a deferred benefit. The sum of the employer-funded vested benefits (taken as immediate benefits) is \$3,772.3 million as at 30 June 2003. The sum of the value of vested deferred benefits is \$5,378.8 million.

The progress of the funding indices over successive investigations has been:

| | Vested Benefits | Deferred Benefits |
|--------------|-----------------|-------------------|
| 30 June 1997 | -0.45 | -0.16 |
| 30 June 2000 | 1.31 | 0.96 |
| 30 June 2003 | -0.34 | -0.22 |
| 30 June 2006 | -0.46 | -0.32 |

Accrued benefits are the present value of benefits expected to be payable in the future in respect of completed membership at the valuation. The total value of employer-financed benefits is allocated to past and future service using the proportional method. The total liability for accrued employer-financed benefits in respect of contributors is \$6,487.9 million.

The progress of this index over successive investigations has been:

| | |
|--------------|-------|
| 30 June 1997 | -0.11 |
| 30 June 2000 | 0.64 |
| 30 June 2003 | -0.18 |
| 30 June 2006 | -0.27 |

6.5.5 Unfunded Liability - Sensitivity Tests

In order to test the sensitivity of the results of the valuation to the economic assumptions made, the effect on the unfunded liability of varying each factor by plus or minus 1% was calculated. The alternative bases used were:

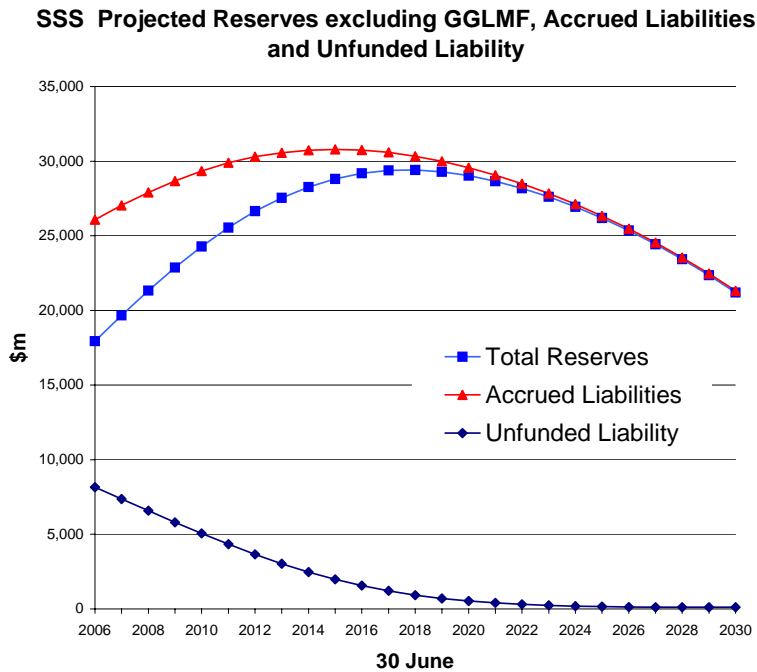
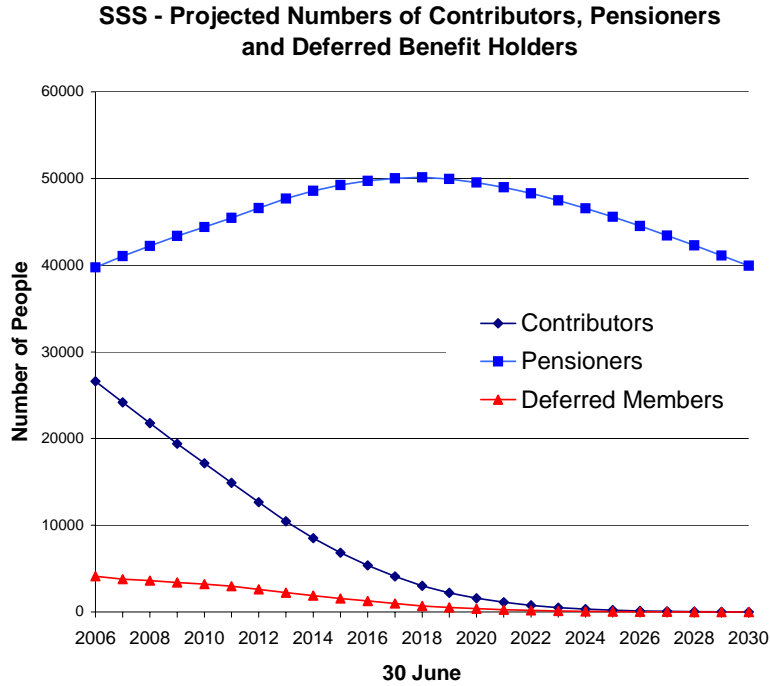
- (a) earned interest rate +1% (long term rate 8%/8.7% p.a)
- (b) earned interest rate -1% (long term rate 6%/6.7% p.a)
- (c) inflationary salary increases +1% (long term rate 5%)
- (d) inflationary salary increases -1% (long term rate 3%)
- (e) CPI increases +1% (long term rate 3.5%)
- (f) CPI increases -1% (long term rate 1.5%)
- (g) Rate of salary increase 4.0% per annum until 30 June 2008 and 3.5% per annum thereafter

The table below shows the employer unfunded liability (ignoring GGLMF) under SSS under each of the above assumptions.

| Assumption | | Employer Unfunded Liability \$m |
|-----------------|---|------------------------------------|
| Valuation basis | | 8,152.1 |
| (a) | +1% interest | 5,416.5 |
| (b) | -1% interest | 11,531.0 |
| (c) | +1% salary increase | 8,604.6 |
| (d) | -1% salary increase | 7,733.5 |
| (e) | +1% CPI increase | 11,090.3 |
| (f) | -1% CPI increase | 5,687.0 |
| (g) | Rate of salary increase 4.0% per annum until 30 June 2008 and 3.5% per annum thereafter | 8,010.7 |

6.6 Projections for SSS

A projection of the State Superannuation Scheme was carried out using the valuation assumptions as set out in Volume II, and assuming that employers contribute the multiple required to reach a fully funded status when there are no more contributing members. (7.3 times member contributions). (Note that the funding strategy used for these projections is different to the overall funding strategy as set out in Section 6.9).



6.7 PSS – Valuation of Liabilities

The PSS valuation liabilities include both Member Reserves and Employer Reserves but exclude the GGLMF.

6.7.1 Unfunded Liability

The unfunded liability for accrued benefits is set out below.

| PSS | | |
|--|------------|------------|
| | \$m | \$m |
| Present value of benefits (fully accrued) payable to existing pensioners | | |
| • pensions in course of payment | 3,248.6 | |
| • reversionary pensions | 131.9 | |
| | | 3,380.5 |
| Plus | | |
| Present value of benefits (fully accrued) payable to existing deferred members | | 20.4 |
| Plus | | |
| Present value of benefits payable in future to contributors in respect of service prior to the valuation date: | | |
| • male contributors | | 2,056.1 |
| • female contributors | | 222.7 |
| Less | | |
| Member Reserve adjustment (refer Volume II) | | 24.5 |
| Amount of fund (excluding the GGLMF) | | 962.5 |
| Gives | | |
| Unfunded past service liability | | 4,692.7 |

If the valuation assumptions of the 2003 investigation had been retained, then the unfunded liability would have been \$4,356.4 million rather than \$4,692.7 million.

6.7.2 Unfunded Superannuation Liability - Financial Progress

The PSS investigation as at 30 June 2003 revealed an unfunded liability to be met by the employer of \$3,489.0 million. The main reasons for the increase in the unfunded liability to \$4,692.7 million at 30 June 2006 are set out below. The method used is to assess the effect of differences between the assumptions made at the previous valuation and the actual experience of the inter-investigation period.

- Rates of investment earnings were higher than expected, reducing the deficiency;
- Rates of salary increase were higher than expected, increasing the deficiency;
- CPI increases were lower than expected, reducing the shortfall;

- Significantly higher than expected disabilities gave rise to a deficiency. In respect of other exits, the rates of resignation were lower than expected, reducing anticipated surplus;
- No Crown employer contributions were paid during the investigation period, due to Crown funding strategies. The accrual of benefits thus leads to an increase in the deficiency; (Note that the GGLMF is excluded from the reserves for this analysis.);
- Following analysis of the experience, the valuation basis was altered. The combined effect of capitalising the future gains and losses due to the differences between the two bases resulted in an increase in the current unfunded liability. The major factors in the basis change affecting the magnitude of the increase are changed discount rate for pensioners, changes to pensioner mortality, lower commutation of pensions and the increased disablement rates;

Set out below is a summary of the progress of the deficiency, showing the estimated financial effect of the major items:

| PSS | |
|--|--------------|
| Item | \$m |
| Unfunded past service liability as at 30 June 2003 | 3,489.0 |
| plus interest to 30 June 2006 at old valuation rate | 785.2 |
| Surplus due to higher than expected investment earnings | -299.0 |
| Surplus due to lower than expected salary increases | -48.3 |
| Surplus due to lower than expected CPI increases | -14.2 |
| Exits - deficiency due to lower than expected resignations | 16.8 |
| - deficiency due to high disabilities | 169.8 |
| Excess of accrual over contributions (nil contribution) | 298.8 |
| Change in valuation basis at 30 June 2006 | 336.3 |
| Other sources and rounding | <u>-41.7</u> |
| Unfunded liability at 30 June 2006 | 4,692.7 |

6.7.3 Total Liability including benefits and contributions in respect of future service

The valuation balance sheet as at 30 June 2006 for the Police Superannuation Scheme is set out below, taking into account total service benefits as well as expected future contributions, expenses and taxes.

| PSS | |
|--|------------|
| | \$m |
| Present value of benefits (fully accrued) payable to existing pensioners | |
| • pensions in course of payment | 3,248.6 |
| • reversionary pensions | 131.9 |
| | 3,380.5 |
| Plus | |
| Present value of benefits (fully accrued) payable to existing deferred members | 20.4 |
| Plus | |
| Present value of benefits payable in future to contributors in respect of service prior to the valuation date: | |
| • male contributors | 2,056.1 |
| • female contributors | 222.7 |
| Plus | |
| Present value of benefits payable in future to current contributors in respect of future service: | |
| • male contributors | 689.1 |
| • female contributors | 110.5 |
| Plus | |
| Present value of future expenses of management | 40.5 |
| Less | |
| Present value of future contributions by employees at 6% of members' salaries | 99.6 |
| Less | |
| Member Reserve adjustment (refer Volume II) | 24.5 |
| Amount of fund (excluding GGLMF) | 962.5 |
| Gives | |
| Shortfall to be met by future employer contributions | 5,433.3 |

We have calculated the Aggregate Employer Contribution Rate required over the future working life-time of current members to fully fund (after taking into account future employee contributions) all benefits arising from future service only. The rate is 44.2% of members' salaries.

The total employer contribution required to fund all benefits, expenses and taxes expressed as a level percentage of the salaries of current members is an annual contribution approximately equal to 362% members' salaries. (No account is taken of any reduction in tax due to PJFC credits, nor of the effect of the GGLMF)

6.7.4 Funding Status

PSS benefits are funded by a 6% contribution from in force membership, the balance being met by the Consolidated Fund. A funding strategy is in place to fully fund accrued benefits.

Assets available for contributors after fully covering benefits due to current pensioners and deferred members as well as covering contributor reserves but excluding the GGLMF amount to negative \$2,870.5 million (ie funds are currently insufficient by that amount to pay for pensioner and deferred members and contributor reserves).

Vested benefits are the benefits payable on immediate withdrawal from the scheme, ie normal or early retirement benefit if eligible else the resignation benefit. The benefit may be taken as an immediate benefit or as a deferred benefit. The sum of the vested benefits (taken as immediate benefits) is \$110.4 million as at 30 June 2006. The sum of the value of vested deferred benefits is \$390.7 million.

The progress of the shortfall in funding over successive investigations has been:

| | Vested Benefits | Deferred Benefits |
|--------------|------------------------|--------------------------|
| | \$m | \$m |
| 30 June 1997 | -1,585.6 | -1,692.7 |
| 30 June 2000 | -844.8 | -1,191.5 |
| 30 June 2003 | -2,011.6 | -2,360.8 |
| 30 June 2006 | -2,980.9 | -3,261.2 |

6.7.5 Alternative bases - sensitivity tests

In order to test the sensitivity of the results of the valuation to the economic assumptions made, the effect on the unfunded past service liability of varying each factor by plus or minus 1% was calculated. The alternative bases used were:

- (a) earned interest rate +1% (long term rate 8%/8.7%p.a)
- (b) earned interest rate -1% (long term rate 6%/6.7%p.a)
- (c) inflationary salary increases +1% (long term rate 5%)
- (d) inflationary salary increases -1% (long term rate 3%)
- (e) cpi increases +1% (long term rate 3.5%)
- (f) cpi increases -1% (long term rate 1.5%)
- (g) Rate of salary increase 4.0% per annum until 30 June 2008 and 3.5% per annum thereafter

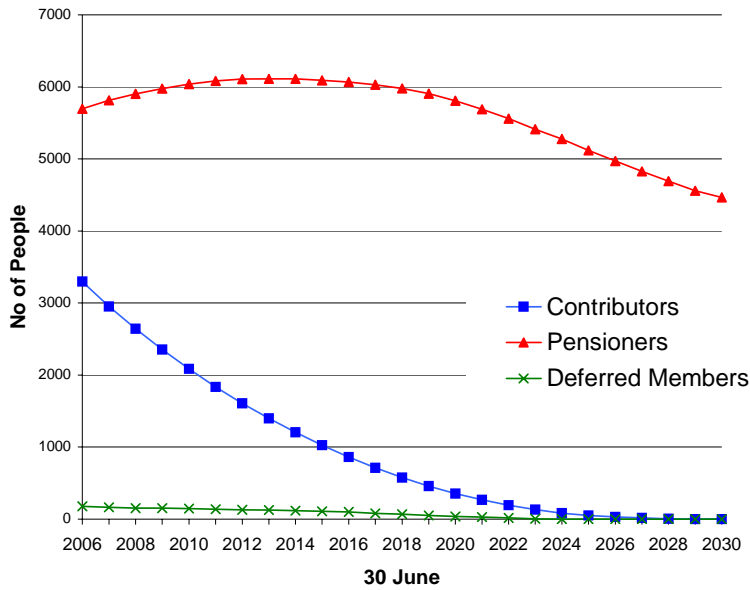
The table below shows the unfunded past service liability under PSS with each of the above assumptions.

| Assumption | | Unfunded Past Service Liability \$m |
|-------------------|---|--|
| Valuation basis | | 4,692.7 |
| (a) | +1% interest | 4,108.2 |
| (b) | -1% interest | 5,453.5 |
| (c) | +1% salary increase | 4,826.7 |
| (d) | -1% salary increase | 4,568.9 |
| (e) | +1% CPI increase | 5,133.3 |
| (f) | -1% CPI increase | 4,322.5 |
| (g) | Rate of salary increase 4.0% per annum until 30 June 2008 and 3.5% per annum thereafter | 4,649.7 |

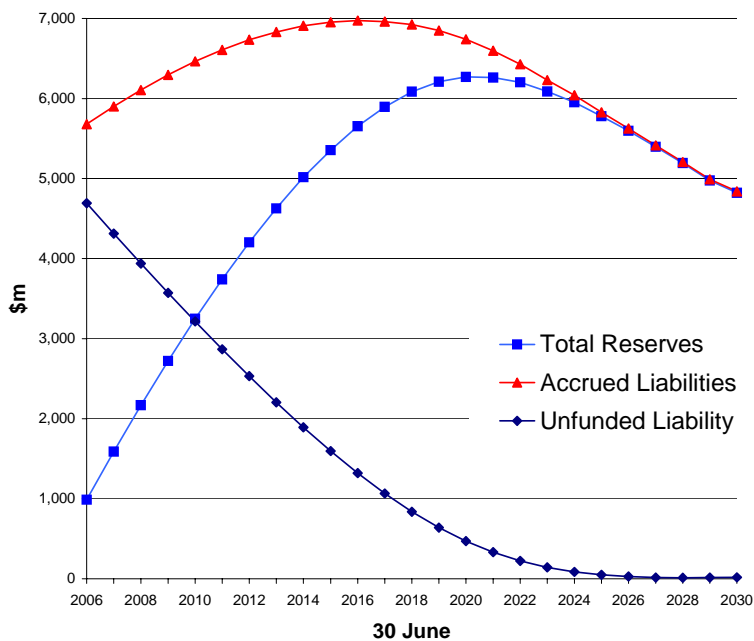
6.8 Projections for PSS

A projection of the Police Superannuation Scheme was carried out using the valuation assumptions as set out in Volume II, and assuming that employers contribute at the contribution rate required to reach a fully funded status when there are no more contributing members. (362% salaries). (Note that the funding strategy used for these projections is different to the overall funding strategy as set out in Section 6.9).

PSS - Projected Numbers of Contributors, Pensioners and Deferred Benefit Holders



PSS Projected Reserves excluding GGLMF, Accrued Liability and Unfunded Liability

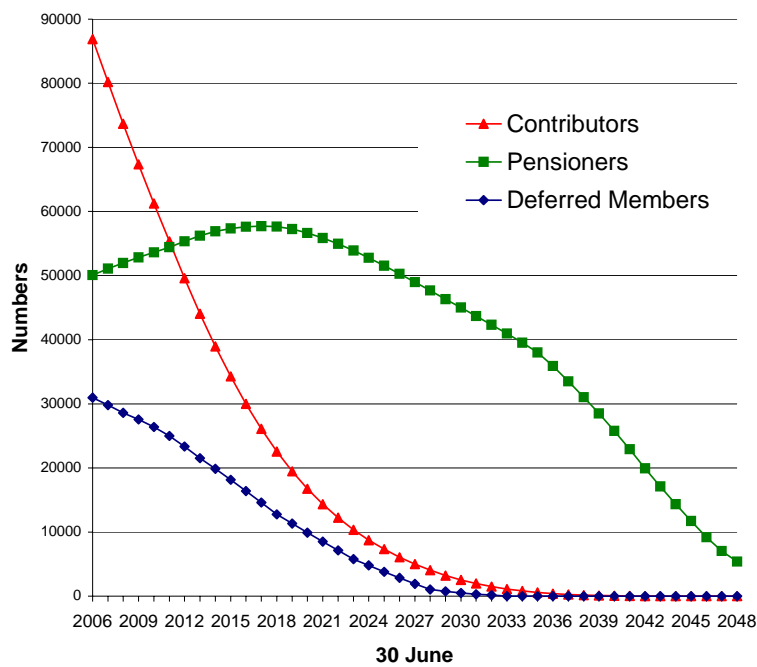


6.9 Total Pooled Fund Results

6.9.1 Consolidated Pooled Fund Projected Membership

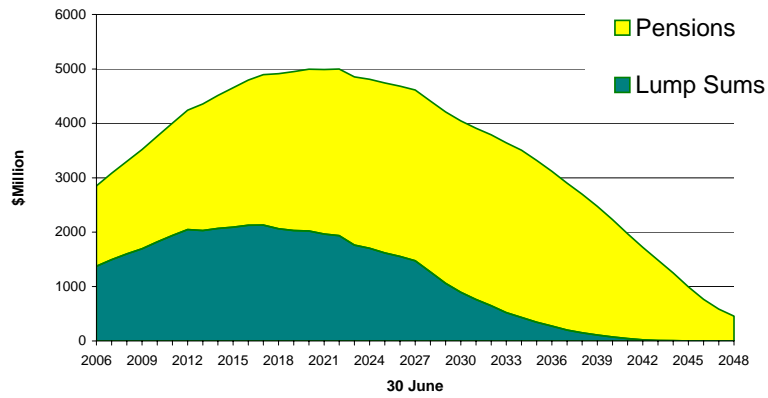
The graph below shows projected numbers of contributors for the total Pooled Fund (excluding SANCS contributors as each SANCS contributor has an associated SASS, SSS or PSS membership), pensioners and deferred members.

Total Pooled Fund - Projected Numbers of Contributors, Pensioners and Deferred Members



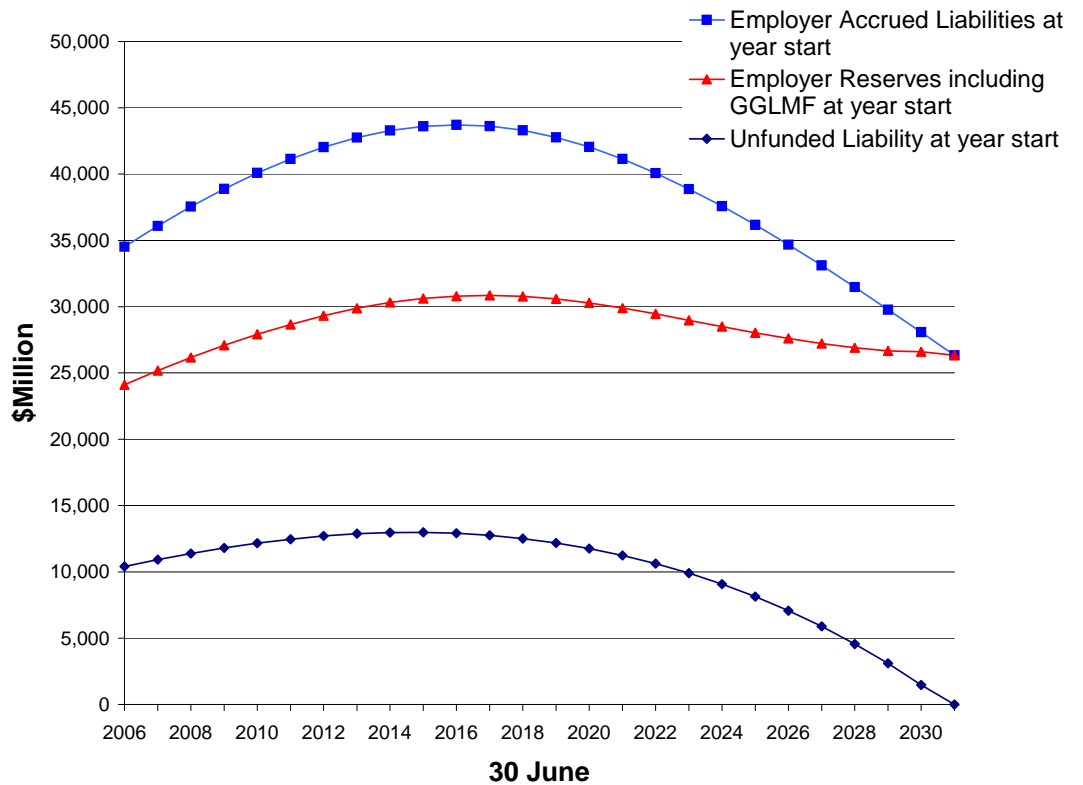
6.9.2 Consolidated Pooled Fund Projected Total Benefits

Total Pooled Fund - Projected Total Benefit Outgo



6.9.3 Consolidated Pooled Fund Employer Reserves including GGLMF - Projected Reserves and Liabilities

Pooled Fund Employer Reserves including GGLMF



The Pooled Fund's financial position in respect of the Employer's Reserve has been projected to 30 June 2031 and the results are set out above. The above graph projects total employer contributions of \$1,200 million per annum increasing by CPI thereafter, until 2030. This level of contribution is illustrative only and was chosen to target a zero unfunded liability at the end of the year 2030-2031. The balance of the GGLMF was included in employer reserve assets at 30 June 2006.

Note that although the graph above is truncated at 2031, employer reserves and accrued liabilities remain significant for a number of years after 2031.

SSS and PSS deferred benefits only have been included in the above projection. SASS and SANCS deferred benefits are fully funded and hence this omission does not affect the level of the unfunded cover.

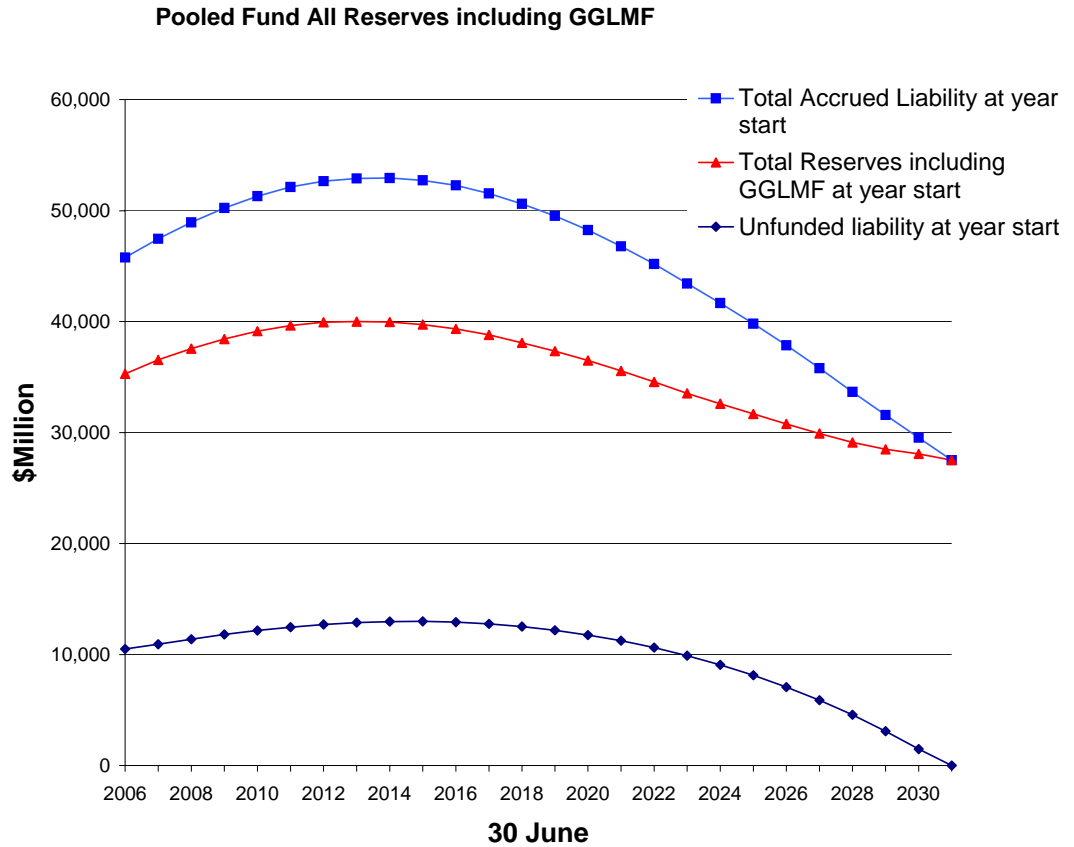
The progress of the unfunded liability over the period from 1 July 2000 and projected to the next valuation is as follows:

| | Unfunded Liability \$ million |
|--------------|--|
| 1 July 2000 | 6,795 |
| 1 July 2003 | 15,006.6 |
| 1 July 2006 | 10,435.7 |
| 1 July 2009* | 11,824.7 |

* Estimate

6.9.4 Total Pooled Fund including GGLMF

The results set out below are for Total Assets including GGLMF and Total Accrued Liabilities (ie including contributor and deferred reserves). Other assumptions are as for 6.9.3.



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