REPORT TO THE TRUSTEES OF THE NATAL JOINT MUNICIPAL PENSION FUND (SUPERANNUATION) (12/8/553) ON THE STATUTORY ACTUARIAL VALUATION AS AT 31 MARCH 2014

(Based on audited Financial Statements)

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EXECUTIVE SUMMARY

1. At the request of the Fund's Trustees, we have performed a statutory actuarial valuation of the Natal Joint Municipal Pension Fund (Superannuation) ("the Fund") as at 31 March 2014 ("the valuation date").

2. The previous statutory actuarial valuation of the Fund was performed as at 31 March 2011 ("the previous valuation date") and was accepted by the Financial Services Board ("FSB") on 19 March 2012. We have also performed interim actuarial valuations as at 31 March 2012 and 31 March 2013 and copies of these reports were submitted to the FSB in terms of the approved Section 18 scheme of the Fund.

3. We are satisfied that the data, financial information and other supporting information that was provided to us are suitable for the purposes of this report. The data are summarised as follows:

Members

	31 March 2014	31 March 2011	Difference
Number	4 964	5 473	-509
Annual salary			
- Total (R'000s)	956 756	877 786	9.0%
- Average (R's)	192 739	160 385	20.2%
Salary weighted average			
- Age (years)	47.65	46.70	0.95
- Service (years)	16.28	15.33	0.95

Pensioners

	31 March 2014	31 March 2011	Difference
Number[1]	5 708	5 150	558
Annual pension[2]			
- Total (R'000s)	256 092	189 146	35.4%
- Average (R's)	44 865	36 727	22.2%
Pension weighted average			
- Age (years)	66.25	65.51	0.75

1. Includes 1 019 suspended and 347 pending pensioners as at 31 March 2011 and 1 282 suspended and 310 pending pensioners as at 31 March 2014.
2. Including pension increases to 1 July 2013

4. The market value of the Fund's assets was R 8 923 854 000 at the valuation date. The value placed on the assets for purposes of the valuation is as follows:

	31 March 2014 R'000	31 March 2011 R'000
Market value of assets	8 923 854	5 614 553
Investment Reserve	- 413 018	- 113 097
Actuarial value of assets	8 510 836	5 501 456

5. The required contribution rates and the rates being paid as at the valuation dates are summarised as follows:

	31 March 2014	31 March 2011
Required rate		
Accrued benefits	30.34%	29.63%
Expenses	1.25%	1.25%
Total	31.59%	30.88%
Actual rate		
Local Authorities	21.63%	18.00%
Members	9.25%	9.25%
Total	30.88%	27.25%
Shortfall/excess in contributed rate	-0.71%	-3.63%
Surcharge		
Local Authorities	9.50%	7.00%

6. It is seen that the contribution rate being paid by the local authorities is less than the theoretical required contribution rate for future service benefits.

7. The surcharges reflected above are payable in terms of the "Scheme to Eliminate Deficiency" in terms of Section 18 of the Pension Funds Act; the Scheme was implemented with effect from 1 August 2012 and approved by the FSB on 24 June 2013. The surcharges are payable for 8 years after date of implementation.

8. A discussion of the required contribution rate as well as the surcharges and solvency reserves is set out in paragraphs 102 to 109 of the main report. We comment briefly on the conclusions below.

9. The financial position of the Fund as at the valuation dates is summarised in the following table:

	31 March 2014 R'000	31 March 2011 R'000
<u>Memorandum Account: Pensioners</u>		
Assets:	**4 005 403**	**2 458 059**
Liabilities and Reserves:		
Accrued liability[1]	2 945 052	2 096 984
Risk Reserve	68 859	45 622
Solvency reserve: balance of assets	991 492	315 453
	4 005 403	**2 458 059**
Surplus/(Deficit)	**0**	**0**
Funding level (after Solvency Reserve)	**100.0%**	**100.0%**
Funding level (before Solvency Reserve)	132.9%	114.7%
<u>Active members</u>		
Assets:	**4 505 433**	**3 043 397**
Liabilities and Reserves:		
Accrued liability	4 179 439	3 510 849
Risk Reserve	85 027	82 081
Contribution reserve	59 871	0
Solvency Reserve: PMB liability	146 190	0
Solvency Reserve: Active members	34 906	0
	4 505 433	**3 592 930**
Surplus/(Deficit)	**0**	**- 549 533**
Funding level	**100.0%**	**84.7%**
<u>Total Fund</u>		
Total assets	**8 510 836**	**5 501 456**
Total liablities, reserves and accounts	**8 510 836**	**6 050 989**
Total Surplus/(Deficit)	**0**	**- 549 533**
Funding level	**100.0%**	**90.9%**

1 Includes liability for pension increase at 1 July 2014 plus the recommended Prescribed Minimum increase and the 13th pension cheque of November 2014

10. In the main body of the report (see paragraph 102 to 109), we draw the Trustees' attention to the following matters:

10.1 The Fund's Pension Increase Policy includes an allowance for a 13th pension cheque to be paid to pensioners subject to affordability. In the previous interim valuation, we included an allowance for payment of the 13th pension cheque in the future as part of the Solvency Reserve for pensioners. This effectively places a greater level of certainty on payment of the 13th pension cheque each year but does not guarantee such payment.

10.2 This was done as payment of the 13th pension cheque had become an expectation of pensioners and therefore should be funded for. This approach does mean that new retirees may enjoy the benefit of a 13th pension cheque and be subsidised by assets in the Pensions Memorandum Account.

10.3 A preliminary report on this valuation was discussed at the Trustee meeting in October 2014. The costs of funding for the 13th pension cheque on both pensioner and member level were set out in the preliminary report. Based on the results set out in the preliminary report, the Trustees decided that the 13th pension cheque should not be funded for in the valuation since it was not guaranteed and would not be affordable.

10.4 We have therefore not included a provision for the long term funding of a 13th pension cheque in either the active or pensioner liability. We have however allowed for the cost of the 13th pension cheque in November 2014 in the pensioner liabilities, as this has already been granted by the Trustees.

10.5 At the valuation date the Fund does not have sufficient assets to hold a full Solvency Reserve (see paragraph 90 of the main report) in respect of the active members. There is no statutory requirement to maintain a Solvency Reserve, but if no Solvency Reserve is held, the Fund has little protection against adverse experience. Markets are very volatile currently and economic forecasts are highly uncertain, and we thus recommend, in line with good practice, that the Trustees aim to hold a Solvency Reserve at the full theoretical level.

10.6 We recommend that the current surcharge of 9.5% of pensionable salaries continues to be paid towards establishing a Solvency Reserve to protect the Fund against adverse experience on the active member liabilities and assets.

10.7 The rate of contribution being paid to the Fund is not sufficient to meet the cost of the benefits. It is necessary to set aside a reserve to hold assets equal to the expected shortfall, which was 0.71% of pensionable salaries at the valuation date. For this reason a "Contribution Reserve" was introduced equal to the present value of the shortfall in terms of the Financial Services Board's Circular PF117.

11. It is noted that the provincial authorities are rewriting the regulations governing the Fund in order to align the benefits between the three Natal Joint Funds and to modernise the wording. It has been proposed that several benefits provided by the Fund be improved; the cost of such improvements has not been taken into account in the results of this valuation since the possible improvements are still under discussion.

12. The key findings and recommendations in the report are:

12.1 The valuation reveals that the Fund is 100% funded on the "best estimate" basis as at the valuation date, but that it is not fully funded on the "financial soundness" basis incorporating a Solvency Reserve.

12.2 I therefore recommend that the surcharge continue to be paid at a level of 9.5% of pensionable salaries to build up the Solvency Reserve to the recommended level.

12.3 I recommend that a Contribution Reserve be set up equal to the present value of the shortfall in contributions required to fund the cost of the benefits.

12.4 The Fund self-insures its risk benefits. The lump sum element of these benefits is relatively small, with the major element comprising of annuity payments. I am satisfied that, given the recommended Risk Reserve, the Fund's reinsurance arrangements are appropriate.

12.5 I am satisfied that the asset composition on the valuation date is appropriate to the nature of the liabilities and that the investment strategy of the Fund is suitable for the Fund.

13. In my view the Fund is in a sound financial position as at the valuation date.

AR ELS (FIA FASSA CFP® CFA CERA)
VALUATOR

My primary professional regulator is the Actuarial Society of South Africa

In my capacity as an employee of ARGEN Actuarial Solutions

RIA VAN DER MERWE
ACTUARIAL CONSULTANT

In my capacity as an employee of ARGEN Actuarial Solutions

October 2014

INTRODUCTION

1. At the request of the Fund's Trustees, we have performed a statutory actuarial valuation of the Natal Joint Municipal Pension Fund (Superannuation) ("the Fund") as at 31 March 2014 ("the valuation date").

2. This report is addressed to the Fund's Trustees. Any other party placing any reliance on this report is encouraged to firstly consult with the Trustees and ourselves.

3. The previous statutory actuarial valuation of the Fund was performed as at 31 March 2011 ("the previous valuation date") and was accepted by the Financial Services Board ("FSB") on 19 March 2012. We have also performed interim actuarial valuations as at 31 March 2012 and 31 March 2013 and copies of these reports were submitted to the FSB in accordance with the "Scheme to Eliminate Deficiency" in terms of Section 18 of the Pension Funds Act ("the Act").

4. The three year period between the valuation dates is referred to as the "valuation period".

5. The Fund is registered in terms of the Pension Funds Act and approved by the South African Revenue Services for Income Tax purposes.

6. This report has been peer reviewed by an independent Consulting Actuary, Mr Jeremy Andrew, and his feedback has been taken into account.

Previous interim actuarial valuation report

7. The 31 March 2013 interim actuarial valuation report made the following recommendations:

   7.1 That a Risk Reserve and Solvency Reserve be maintained at the levels set out in that report; and

   7.2 That the surcharge continues to be paid at a level of 9.5% of pensionable salaries.

8. The above recommendations were accepted by the Fund's Trustees and implemented.

Purpose of the actuarial valuation

9. The purpose of this statutory actuarial valuation is:

   9.1 To assess whether the existing assets of the Fund are sufficient to cover the Fund's accrued liabilities towards its members for service prior to the valuation date, and towards its pensioners;

   9.2 To analyse the change in the financial position of the Fund during the valuation period;

   9.3 To determine the contribution rate that is required in order to fund the future benefits of the members;

   9.4 To review the requirement for the contingency reserve accounts and assess whether these accounts are appropriately funded and to review the build up thereof;

   9.5 To assess whether the Fund's reinsurance arrangements are appropriate;

9.6 To assess whether the nature of the assets of the Fund is suitable to match the nature of the liabilities of the Fund and whether the investment strategy is appropriate;

9.7 To determine whether the targeted pension increase is sustainable and the likelihood of it being realized; and

9.8 To recommend an appropriate contribution rate to amortise any deficit.

10. This report is a statutory actuarial valuation report and as such a copy of this report must be submitted to the Registrar of Pension Funds within twelve months of the valuation date. A copy of this report must therefore be submitted to the Registrar's office by 31 March 2015.

Developments during and subsequent to the valuation period

11. The Fund's Trustees revised the Pension Increase Policy with effect from 1 April 2013 and again from 1 September 2013 to correct inaccuracies as well as to include the provision in terms of Regulation 37 that allows for special increases to be granted subject to affordability. The Pension Increase Policy is summarised as follows:

11.1 Pension increases are granted at 1 July each year. Pensions in payment for less than 1 year at the previous 1 March receive a pro-rata increase;

11.2 The Pension Increase Policy targets pension increases of at least 75% of the annual Headline Inflation averaged over the previous calendar year. The policy gives the trustees discretion to grant increases up to 100% of the average annual Headline Inflation subject to affordability. In exceptional circumstances, and if affordable, the Trustees may grant increases in excess of the average annual Headline Inflation;

11.3 The Trustees may, on advice of the actuary, grant a 13th pension cheque to each pensioner in November of each year subject to affordability from the assets in the Pensions Memorandum Account; and

11.4 The Pension Increase Policy will be reviewed at least every three years coinciding with the Fund's statutory valuation. Any change in the policy will be communicated to pensioners. The Pension Increase Policy will be reviewed following this valuation.

12. The Trustees granted a 13th pension cheque to pensioners in November of each of the years in the valuation period.

13. Because the 13th pension cheque is not guaranteed, only the 13th pension cheque payable in November 2014 is funded for in the valuation. This matter is discussed further in paragraphs 102 to 106 below.

14. The following pension increases were granted during the valuation period:

Date	Pension Increase	CPI for year to 31 March	Average CPI for year to previous 31 Dec
1 July 2011[1]	4.32%	4.1%	4.29%
1 July 2012	5.04%	6.0%	4.99%
1 July 2013	5.66%	5.9%	5.66%
1 July 2014	5.75%	6.0%	5.75%

1 This was included in the liabilities for the last statutory valuation as well as in the investigation into the prescribed minimum pension increases in that valuation

15. The Investment Policy Statement of the Fund was reviewed in line with an asset liability modelling exercise performed as at 30 September 2012.

16. The average annual salary increase for members who were present at both the start and end of each year was as follows:

Date	Salary Increase (p.a.)
31 March 2012	8.07%
31 March 2013	8.60%
31 March 2014	8.96%

17. Members contributed at 9.25% of pensionable salaries during the valuation period. Local authorities contributed at 18.00% of pensionable salaries from 1 April 2012 to 31 July 2012 and 21.63% from 1 August 2012 to the valuation date.

18. A surcharge of 7% of pensionable salaries was paid until 31 July 2012 and increased to 9.5% from 1 August 2012 in terms of a "Scheme to Eliminate Deficiency" that was submitted to the FSB by the Fund in terms of Section 18 of the Act.

Regulations and amendments

19. Since the last statutory valuation date Rule amendments 8, 9, 10 and 11 have been registered by the Registrar of Pension Funds. The items of importance in these amendments are:

    19.1 Providing for the Risk Reserve Account, Solvency Reserve Account, Contribution Reserve Account, Data Reserve Account and Investment Reserve Account in the regulations of the Fund;

    19.2 Updating provisions regarding the Trustees;

    19.3 Updating provisions for contract employees; and

    19.4 Capping of increases in pensionable salary to Headline Inflation. The Trustees have discretion in this regard, and capping has not yet been implemented because the provincial legislation has not yet been amended correspondingly.

19.5 The provincial legislators are attending to the "rationalisation" of the provincial legislation. Once this has been finalised, a set of revised regulations for the Fund will be submitted to the FSB for registration.

19.6 As part of the rationalisation project, it has been proposed that several benefits provided by the Fund be improved; the cost of such improvements has not been taken into account in the results of this valuation since the possible improvements are still under discussion.

20. The key benefits and conditions set out in the regulations are summarised in Appendix 1.

Professional guidance

21. This report adheres to the Standard of Actuarial Practice SAP201 of the Actuarial Society of South Africa and the relevant Board Notices issued by the Financial Services Board.

FUND STRUCTURE

22. The Fund is governed by its regulations as approved by the Registrar of Pension Funds and promulgated by the provincial legislature of Kwa-Zulu Natal.

23. The Fund is a pension fund and its members and pensioners are entitled to benefits of a defined benefit nature.

24. The Fund is closed to new entrants. Members of the other Natal Joint funds are, however, allowed to transfer into the Fund subject to certain conditions.

25. The benefits and members' contributions are fixed. The local authorities are responsible for making contributions towards the Fund that meet the balance of the cost of providing the promised benefits.

26. Retiring members receive their pension benefits from the Fund.

27. The Fund's regulations allow for the Fund to hold a Solvency Reserve, Risk Reserve, Contribution Reserve, Investment Reserve and Data Reserve Account.

28. The assets and liabilities in respect of pensioners are notionally separated in a Pensions Memorandum Account.

VALUATION INFORMATION

29. The Fund is self-administered. The Fund's administrators supplied the necessary valuation data and information.

30. To carry out this valuation, we were provided with the following information:

    30.1 Audited financial statements of the Fund for the year ending 31 March 2014;

    30.2 The member and pensioner data as at 31 March 2014.

    30.3 A copy of the Fund's Investment Policy Statement;

    30.4 A copy of the Fund's Pension Increase Policy; and

    30.5 A copy of the Fund's regulations including amendments to 31 March 2014.

31. The results of the valuation depend critically on the accuracy of the data supplied. The data has been tested for general consistency (see Appendix 2). In our view the data and information provided to us are adequate for the key purposes of this valuation. The valuation was based on the audited financial statements of the Fund.

Membership data

32. The member data are summarised as follows as at the valuation dates:

	31 March 2014	31 March 2011	Difference
Females			
Number	1 685	1 681	4
Annual salary			
- Total (R'000s)	312 163	261 735	19.3%
- Average (R's)	185 260	155 702	19.0%
Salary weighted avg			
- Age (years)	45.47	45.30	0.17
- Service (years)	14.25	13.60	0.65
Males			
Number	3 279	3 792	-513
Annual salary			
- Total (R'000s)	644 593	616 050	4.6%
- Average (R's)	196 582	162 460	21.0%
Salary weighted avg			
- Age (years)	48.71	47.30	1.41
- Service (years)	17.27	16.06	1.21

33. A summary of the membership particulars is provided in Appendix 3.

Pensioner data

34. The pensioner data are summarised as follows as at the valuation date.

	31 March 2014	31 March 2011	Difference
Deferred pensioners			
Number	108	107	1
Annual pension[1]			
- Total (R' 000s)	7 753	5 617	38.0%
- Average (R's)	71 787	52 495	36.7%
Pension weighted average age (yrs)	55.90	53.70	2.20
Children			
Number	1 737	1 491	246
Annual pension[1]			
- Total (R' 000s)	12 786	10 763	18.8%
- Average (R's)	7 361	7 219	2.0%
Pension weighted average age (yrs)	18.43	17.00	1.43
Widow/ers			
Number	1 578	1 485	93
Annual pension[1]			
- Total (R' 000s)	64 179	52 956	21.2%
- Average (R's)	40 671	35 661	14.1%
Pension weighted average age (yrs)	62.38	62.70	-0.32
Retirees			
Number	2 285	2 067	218
Annual pension[1]			
- Total (R' 000s)	171 374	119 810	43.0%
- Average (R's)	75 000	57 963	29.4%
Pension weighted average age (yrs)	68.18	67.30	0.88

1. Including pension increases to 1 July 2013
2. Includes 1 019 suspended and 347 pending pensioners as at 31 March 2011 and 1 282 suspended and 310 pending pensioners as at 31 March 2014.

35. A summary of the pensioner data is provided in Appendix 3.

Revenue account

36. The Fund's income and outgo during the valuation period is summarised as follows:

	Year ending 31 March 2014 R'000	Year ending 31 March 2013 R'000	Year ending 31 March 2012 R'000
Value of assets at start of year (AFS)	**7 469 553**	**6 240 605**	**5 614 553**
Income			
Contributions:			
- Members	88 524	85 401	83 832
- Local authorities	206 831	188 751	162 566
- Surcharge	126 944	80 227	64 029
Transfers in	20 916	13 066	8 204
Investment returns	1 540 044	1 373 631	728 794
	1 983 259	**1 741 076**	**1 047 425**
Outgo			
Lump sum benefits:			
- Divorces	- 7 583	- 3 486	- 4 487
- Withdrawal	- 46 374	- 72 142	- 53 700
- Retirement	- 121 020	- 126 988	- 92 168
- Retrenchment	- 6	- 939	- 342
- Death	- 13 825	- 14 553	- 8 273
- Transfer to other funds	- 29 547	- 16 660	- 8 247
Pensions	- 262 376	- 231 732	- 209 853
Other	105	160	0
Investment managers' fees	- 35 148	- 32 197	- 29 014
Administration expenses	- 13 184	- 13 591	- 15 289
	- 528 958	**- 512 128**	**- 421 373**
Value of assets at end of year (AFS)	**8 923 854**	**7 469 553**	**6 240 605**

37. Over the valuation period, the Fund earned the following investment returns on its assets taken at market value and actuarial value respectively:

	Investment return	
Date	**Market value**	**Actuarial value**
31 March 2012	12.54%	20.33%
31 March 2013	21.68%	16.06%
31 March 2014	20.21%	14.69%

Assets per financial statements

38. The assets of the Fund, as set out in the audited financial statements, are summarised in the following table:

Asset class	31 March 2014 R'000	%
Local		
Bills, bonds and securities	2 396 501	26.9%
Collective investment schemes		0.0%
Equities	4 142 135	46.4%
Property	312 512	3.5%
Cash and Deposits	253 385	2.8%
	7 104 533	**79.6%**
Foreign		
Bills, bonds and securities	3 297	0.0%
Equities	1 945 277	21.8%
	1 948 574	**21.8%**
Current assets	36 226	0.4%
Current liabilities	- 134 308	-1.5%
Unclaimed benefits	- 31 171	-0.3%
	- 129 253	**-1.4%**
Total assets	**8 923 854**	**100.0%**

Investment strategy

39. The Fund has a detailed investment strategy which takes into account the results of the asset liability modelling exercise as at 30 September 2012 that was completed in March 2013. The Fund's strategic asset allocation in terms of this exercise is set out below. The strategic allocation is the structure that is suitable for the liabilities, taking a long term view. Based on advice from the Fund's asset consultant regarding the short term outlook for property, the Trustees agreed to adopt an interim tactical allocation that excludes property investments over the shorter term, as set out below.

	Asset allocation	
	Strategic	**Tactical**
Local Equities	45.0%	45.0%
Foreign Equities	20.0%	20.0%
Cash	3.0%	0.0%
Fixed interest bonds	22.0%	35.0%
Property	10.0%	0.0%

40. The investment strategy of the Fund targets an investment return of Headline Inflation plus 5% over any rolling 5 year period.

41. The results of the asset liability modelling exercise were used to determine the strategic benchmarks of the Fund as well as the ranges around the benchmarks. The actual asset allocation at the valuation date is within the permissible ranges, as set out in the investment mandates given to the Fund's asset managers

VALUATION METHOD AND ASSUMPTIONS

42. In order to value the Fund's liabilities an actuarial valuation method and valuation assumptions are required.

Valuation method

43. The valuation method consists of a past service component (service up to the valuation date) and a future service component (service after the valuation date).

Past service

44. The Fund's liabilities for members' service to the valuation date and for pensioners was calculated using set of "best estimate" assumptions which are expected to apply over the long-term. Allowance was made for expected salary increases until normal retirement date and pension increases thereafter. The benefits payable by the Fund in future are estimated and these are discounted using the assumed long-term rate of interest, to give the present value of their liabilities for service to the valuation date. A similar approach is taken for pensions in payment. We have allowed for an administration fee of R400 per annum in respect of each pension payable.

45. The Pension Funds Act requires a fund to provide a minimum level of pension increases. In order to meet this requirement, the Fund notionally holds the assets that are directly attributable to its pensioners and deferred pensioners, separately in the Pensions Memorandum Account. Where the value of the pensioner assets exceeds the value of the pensioner liabilities, the excess assets are retained in the Pensions Memorandum Account.

46. We have been provided with information in respect of 1 282 pensioners whose pensions have been suspended because the Fund has not received proof of existence. These pensions were valued on the assumption that the following proportion of the pensions would again become payable:

Period since payments ceased	Proportion
more than 3 years	0
between 2 and 3 years	1/6
between 1 and 2 years	1/2
less than 1 year	5/6

47. We have been provided with details of 310 cases where a spouse's pension is possibly payable following the death of a member in the service or of a pensioner. The Fund is taking steps to trace dependants of the deceased members and pensioners and it is likely that, in a number of cases, no pension will become payable. For the valuation it was decided to include in the liabilities 50% of the calculated value, so that an amount of R 43 642 000 has been included in the Members' liabilities in respect of spouses of pensioners. This matter will be monitored at each valuation and the figure of 50% adjusted appropriately.

Future service

48. The local authorities no longer permit members to join the Fund, so that it has effectively become a closed fund. This implies that the average age of the membership will increase, which in turn will mean an increase in the required rate of contribution. For the last statutory valuation the rate of contribution was determined on the "Attained Age" method. This method takes into account the closed nature of the Fund. It projects the expected benefits payable in each future year based solely on service that the member is expected to complete after the valuation date. The projection makes allowance for demographic decrements and for expected future salary increases. The projected values are then discounted at the assumed investment return in order to obtain the present value of the future service liability as at the valuation date.

49. If the valuation assumptions are realised, this level rate of contribution should remain sufficient despite an increase in the average age of members as reserves are built up when the average age is lower that offsets the costs when the average age is high. This assumption may not be realised if there are significant unforeseen changes in the membership, for example, if a significant number of members transfer between the Fund and the other Natal Joint funds.

50. Additionally, at present, members of the three Natal Joint Funds are permitted to transfer between the funds and this flow of members may affect the rate of contribution required to be paid to the Fund.

51. There is no future service cost in respect of the pensioners or deferred pensioners.

Solvency Reserve

52. The assumptions used for the above calculations are "best estimate" assumptions of future experience. The Pension Funds Act, and the Fund's regulations, permit the Fund to maintain a Solvency Reserve in order to provide some protection to the Fund should the actual future financial experience of the Fund turn out to be less favourable than the "best estimate" financial assumptions used to value the defined benefit member and pensioner liabilities.

53. To determine the Solvency Reserve, the same valuation method as set out in paragraphs 44 to 47 above is used, but the financial assumptions are based on the prevailing risk free rates of interest (see paragraph 69 below). Any resulting increase in the past service liability is held as a Solvency Reserve.

54. Legislation does not oblige a fund to hold a Solvency Reserve for purposes of financial soundness. However, being financially sound only on the "best estimate" basis means that there is still a 50% chance of the Fund being in deficit in the future. We thus strongly recommend that the Fund holds a Solvency Reserve in order to provide protection for the interests of the various stakeholders if affordable. For this purpose we have applied the provisions of PF 117, the Circular issued by the Financial Services Board setting out the level of solvency reserves that the Financial Services Board considers reasonable.

55. Additionally, the provisions of the prescribed minimum benefits in the Act should also be considered (see paragraph 60).

Risk Reserve

56. The Fund self-insures its death and disability benefits and bears the longevity risk for its pensioners. It is prudent to maintain a "Risk Reserve" in order to give some protection against fluctuations in mortality and morbidity experience of the members, and against the longevity risk of pensioners.

57. The Financial Services Board's Circular PF117 sets out a standard for determining such a reserve. A fund may hold a "Risk Reserve" based on the capital that would be required from an insurance company undertaking the business. In the case of the Fund, the Risk Reserve has been determined in accordance with paragraph 4.4 of Circular PF117.

Contribution Reserve

58. The Employer contribution rate is specified in the Fund's Regulations. The actuary may recommend a higher contribution rate if required to fund the cost of the future benefits. Additionally the actuary may also recommend a surcharge to eliminate any deficit in respect of past service benefits.

59. The underlying rate of contribution is not sufficient to meet the cost of the benefits at the valuation date. It is necessary to set aside a reserve to hold assets equal to the expected shortfall, which was 0.71% of pensionable salaries at the valuation date. For this reason a "Contribution Reserve" was introduced equal to the present value of the shortfall in terms of the Financial Services Board's Circular PF117.

Minimum Benefits

60. The Act prescribes minimum benefits to a member who leaves the Fund other than on retirement or death. For each member the actuarial reserve was compared to the value of the minimum benefit that would become payable at each future date, if the member resigned from the service at that date. Where the latter figure exceeded the actuarial reserve, the difference was added to the liabilities of the Fund. The assumptions underlying the calculation of the minimum benefits are set out in Appendix 4 (see paragraph A4.41 to A4.43).

61. Additionally, the total actuarial reserve for each member at the valuation date was compared with the value of the minimum benefit at the valuation date based on the Earnings Yield published by the FSB at the valuation date, i.e. taking into account market conditions at the valuation date. An additional liability of R 146 190 000 would arise at the valuation date if the Fund is terminated at that date. The value of this liability has been held as a Solvency Reserve at the valuation date.

62. The Pension Funds Act prescribes minimum increases to pensioners. The Act requires the valuator to investigate the pension increases granted to pensioners every three years. The actual increases granted since retirement must be compared to the increase in the Consumer Price Index (CPI) and any shortfall must be credited to the pensioners as an additional increase if affordable. The last comparison in this regard was done as at 31 March 2011. The investigation over the valuation period revealed that an additional increase of 1.43% is required in respect of pensioners who retired on or before 1 April 2011 with smaller increases for pensioners who retired subsequent to this date.

63. The actual increase due to a pensioner depends on the date of retirement, for example if the pensioner had been on retirement for at least three years, an increase of 1.43% is payable, backdated to 1 July 2014. We recommend that pensions be increased as

required by the Act, backdated to 1 July 2014. The cost of the increase is included in the liabilities for this valuation.

Sensitivity Analysis

64. The Fund's financial position is sensitive to the key assumptions made in the valuation. The key assumptions are the investment return, salary increase rate and pensioner mortality. All these elements are beyond the direct control of the Fund. A sensitivity analysis is performed at each statutory valuation of the Fund to show the impact of changes in each of these key assumptions on the Fund's financial position. The results are set out in Appendix 7.

Valuation assumptions

65. The valuation assumptions used to determine the Fund's past and future service liabilities are consistent with the "best estimate" assumptions set out in the Financial Services Board's Circular PF 117.

66. The key "best estimate" financial assumptions are:

66.1 Investment returns of 10.0% per annum;

66.2 Price inflation of 6.0% per annum;

66.3 Salary increases of 7.0% per annum, plus a promotional salary scale; and

66.4 Allowance for future pension increases equal to investment returns in excess of 5.0% per annum which is consistent with the Fund's Pension Increase Policy.

67. These assumptions were also used in the previous statutory valuation.

68. At each statutory triennial valuation the Fund's actual experience is compared to the valuation assumptions and where necessary, the assumptions are revised. Based on our experience analysis for the valuation period, the assumptions used in the statutory valuation as at 31 March 2011 are still valid and were retained for this valuation with the exception of the post-retirement mortality for females and the ill-health retirement assumption for all members. The demographic assumptions and a description of the changes are set out in Appendix 4.

69. In order to determine the Solvency Reserve, financial assumptions have been determined on a basis consistent with the Financial Services Board's Circular PF 117. The key financial assumptions are:

69.1 For members:

69.1.1 Investment returns of 8.60% per annum;

69.1.2 Price inflation of 7.12% per annum;

69.1.3 Salary increases of 7.60% per annum, plus a promotional salary scale; and

69.1.4 Allowance for future pension increases equal to investment returns in excess of 2.75% per annum;

69.2 For pensioners:

69.2.1 Investment returns of 8.24% per annum;

69.2.2 Price inflation of 6.86% per annum;

69.2.3 Allowance for future pension increases equal to investment returns in excess of 2.60% per annum.

70. The demographic assumptions used to determine the Solvency Reserve are the same as those used to value the liabilities on the "best estimate" assumptions.

71. The "best estimate" valuation assumptions and Solvency Reserve assumptions are discussed in greater detail in Appendix 4.

72. The cost of the benefits provided by the Fund will depend on the actual financial and demographic experience of the Fund, and not on the valuation assumptions which determine the speed at which assets are accumulated in the Fund. The valuation method and assumptions have no direct bearing on the ultimate cost of the defined benefits; they only determine how this cost is recognised and funded over time.

Assets

73. A comparison between the value of the assets and liabilities of the Fund can only be meaningful if the respective values are determined on a consistent basis.

74. For purposes of the valuation, the actuarial value of the assets was determined on a best estimate basis by discounting the expected future investment income from rental, dividends and interest, at the valuation rate of interest used to calculate the liabilities. Allowance was made for future increases in dividends, rentals etc. This method of valuing the assets is consistent with the long term best estimate valuation of the liabilities. The investment reserve is taken as the difference between the market and actuarial value of assets.

75. The value placed on the assets for purposes of the valuation are therefore as follows:

	31 March 2014 R'000	**31 March 2011 R'000**
Market value of assets	8 923 854	5 614 553
Investment Reserve	- 413 018	- 113 097
Actuarial value of assets	8 510 836	5 501 456

76. Details of the asset values are set out in Appendix 5.

VALUATION RESULTS

Accrued assets and liabilities

77. The results of the valuation are summarised below:

	31 March 2014 R'000	31 March 2011 R'000
<u>Memorandum Account: Pensioners</u>		
Assets:	**4 005 403**	**2 458 059**
Liabilities and Reserves:		
Accrued liability[1]	2 945 052	2 096 984
Risk Reserve	68 859	45 622
Solvency reserve: balance of assets	991 492	315 453
	4 005 403	**2 458 059**
Surplus/(Deficit)	**0**	**0**
Funding level (after Solvency Reserve)	**100.0%**	**100.0%**
Funding level (before Solvency Reserve)	132.9%	114.7%
<u>Active members</u>		
Assets:	**4 505 433**	**3 043 397**
Liabilities and Reserves:		
Accrued liability	4 179 439	3 510 849
Risk Reserve	85 027	82 081
Contribution reserve	59 871	0
Solvency Reserve: PMB liability	146 190	0
Solvency Reserve: Active members	34 906	0
	4 505 433	**3 592 930**
Surplus/(Deficit)	**0**	**- 549 533**
Funding level	**100.0%**	**84.7%**
<u>Total Fund</u>		
Total assets	**8 510 836**	**5 501 456**
Total liablities, reserves and accounts	**8 510 836**	**6 050 989**
Total Surplus/(Deficit)	**0**	**- 549 533**
Funding level	**100.0%**	**90.9%**

1 Includes liability for pension increase at 1 July 2014 plus the recommended Prescribed Minimum increase

78. The valuation reveals that the Fund is 100% funded on the "best estimate" basis as at the valuation date.

79. The valuation results are discussed in more detail below.

Pensioner liabilities

80. The Pensions Memorandum Account comprises the funds held to pay pensions that have been granted in terms of the rules. The assets in the Pensions Memorandum Account include the amount transferred to the Account in respect of new retirees and dependants on the death of a member in service, plus investment earnings, less payments made from this Account. A reconciliation of this Account is as follows:

	Pensions Memorandum Account R'000
Balance at 31 March 2011	2 458 059
Pensions paid	- 703 962
Capital value of new pensioners	763 756
Investment adjustments	1 487 550
Balance at 31 March 2014	4 005 403

81. The value of the liabilities in respect of pensioners amounts to R 2 945 052 000 as at the valuation date and includes a provision for the pension increase as at 1 July 2014 and the cost of the 13th pension cheque in November 2014.

82. The balance in the Pensions Memorandum Account increased over the valuation period. This was mainly due to larger than expected investment returns offset by pension increases.

83. The Pension Increase Policy includes an allowance for a 13th pension cheque to be paid to pensioners subject to affordability. In the previous interim valuation, we included an allowance for payment of the 13th pension cheque in the future as part of the Solvency Reserve for pensioners. This effectively places a greater level of certainty on payment of the 13th pension cheque each year but does not guarantee such payment. No such allowance has been made in this valuation following a discussion of the costs of funding for the 13th pension cheque with the Trustees in a meeting in October 2014. Further detail is provided in paragraphs 103 to 109.

84. The Pensions Memorandum Account is 100% funded after allowing for the Risk Reserve as set out in paragraph 92 below, as well as the Solvency Reserve as discussed in paragraph 89.

Member liabilities

85. The funding level in respect of the active members improved from 84.7% to 100% over the valuation period.

86. The improvement is mainly due to better than expected investment returns, the payment of the surcharge by local authorities and the fact that salaries increased only moderately above inflation.

Solvency Reserve

87. As discussed above, the Solvency Reserve provides a cushion in the Fund against adverse experience, and we recommend that the Trustees endeavour to hold the full Solvency Reserve.

88. The theoretically required Solvency Reserve in respect of members and pensioners is determined as the difference in the past service liability of members when valued using the Solvency Reserve assumptions as compared to the valuation assumptions. The results are set out in the following table:

	Members R' 000s	Pensioners R' 000s
Liability: Solvency Reserve assumptions	5 795 719	3 452 454
Liability:Valuation assumptions	4 179 439	2 945 052
Investment reserve	218 642	194 376
Solvency Reserve	1 397 638	313 026

89. With regards to the pensioners, the balance of the assets in the Pensions Memorandum Account amount to R 991 492 000, which is more than the balance of the full theoretical Solvency Reserve for the pensioners of R 313 026 000. The markets were exceptionally high at the valuation date and there has subsequently been a material correction which has eliminated some of the excess. Additionally, funding of the 13th pension cheque to pensioners is to be discussed at a strategy session of the Trustees which may result in an increase in the pensioner liabilities. I therefore recommend that the balance be kept as a Solvency Reserve at the valuation date.

90. As regards the active members, the level of assets of the Fund in respect of these liabilities is not sufficient to fund the full theoretical required Solvency Reserve for the active members. We have therefore made provision for a partial Solvency Reserve equal to the affordable amount of assets. I recommend, however, that the Trustees aim towards holding a full Solvency Reserve as this becomes affordable.

Risk Reserve

91. The Fund self-insures its death and disability benefits and bears the longevity risk for its pensioners. It is therefore prudent that the Fund retains a Risk Reserve in order to give protection against fluctuations in mortality and morbidity and for that reason we recommend that this reserve be maintained.

92. We have allowed for such a Reserve, comprising R 68 859 000 in respect of pensioners and R 85 027 000 in respect of active members.

93. At the valuation date the total Risk Reserve therefore amounts to R 153 886 000 calculated in accordance with paragraph 4.4 of Circular PF117.

Contribution Reserve

94. The underlying rate of contribution is not sufficient to meet the cost of the benefits. It is necessary to set aside a reserve to hold assets equal to the expected shortfall, which was 0.71% of pensionable salaries at the valuation date. For this reason a "Contribution Reserve" of R 59 489 000 was introduced equal to the present value of the shortfall.

CONTRIBUTION RATES

Members

95. Members contribute towards the Fund at a rate of 9.25% of pensionable salaries.

96. The local authorities meet the balance of the cost of providing benefits to the defined benefit members. Local authorities contributed at 18.00% of pensionable salaries until 31 July 2012, increasing to 21.63% of pensionable salaries from 1 August 2012.

97. The following table sets out the total cost as at the valuation dates (expressed as a percentage of pensionable salaries):

	31 March 2014	31 March 2011
Required rate		
Accrued benefits	30.34%	29.63%
Expenses	1.25%	1.25%
Total	31.59%	30.88%
Actual rate		
Local Authorities	21.63%	18.00%
Members	9.25%	9.25%
Total	30.88%	27.25%
Shortfall/excess in contributed rate	-0.71%	-3.63%
Surcharge		
Local Authorities	9.50%	7.00%

98. The results above show that the contributions from members and the local authorities at the valuation date are 0.71% less than the required contribution rate for future service.

99. The surcharges reflected above are payable in terms of the "Scheme to Eliminate Deficiency" in terms of Section 18 of the Pension Funds Act which was implemented with effect from 1 August 2012 and approved by the FSB on 24 June 2013. These surcharges are payable for 8 years after date of implementation.

100. A discussion of the Contribution Reserve, recommended contribution rate and surcharge is set out in the section headed "Observations" in paragraph 102 to 109 below.

EXPERIENCE ANALYSIS

101. At each statutory triennial valuation the reasons for the change in the surplus/shortfall are investigated. We have included the analysis in Appendix 8. This provides the Trustees with a quantitative measurement of the Fund's changing financial condition.

OBSERVATIONS

102. Based on the results of the valuation as discussed above, we draw the Trustees' attention to the matters discussed below:

103. The Pension Increase Policy includes an allowance for a 13th pension cheque to be paid to pensioners subject to affordability. In the previous interim valuation, we included an allowance for payment of the 13th pension cheque in the future as part of the Solvency Reserve for pensioners. This effectively places a greater level of certainty on payment of the 13th pension cheque each year but does not guarantee such payment.

104. This was done as payment of the 13th pension cheque had become an expectation of pensioners and therefore should be funded for. This approach does mean that new retirees may enjoy the benefit of a 13th pension cheque and be subsidised by assets in the Pensions Memorandum Account.

105. A preliminary report on this valuation was discussed at the Trustee meeting in October 2014. The costs of funding for the 13th pension cheque on both pensioner and member level were set out in the preliminary report. Based on the results set out in the preliminary report, the Trustees decided that the 13th pension cheque should not be funded for in the valuation since it was not guaranteed and would not be affordable.

106. We have therefore not included a provision for the long term funding of a 13th pension cheque in either the active or pensioner liability. We have however allowed for the cost of the 13th pension cheque in November 2014 in the pensioner liabilities, as this has already been granted by the Trustees.

107. At the valuation date the Fund does not have sufficient assets to hold a full Solvency Reserve (see paragraph 90 of the main report) in respect of the active members. There is no statutory requirement to maintain a Solvency Reserve, but if no Solvency Reserve is held, the Fund has little protection against adverse experience. Markets are very volatile currently and economic forecasts are highly uncertain, and we thus recommend, in line with good practice, that the Trustees aim to hold a Solvency Reserve at the full theoretical level.

108. We recommend that the current surcharge of 9.5% of pensionable salaries continues to be paid towards establishing a Solvency Reserve to protect the Fund against adverse experience on the active member liabilities and assets.

109. The rate of contribution being paid to the Fund is not sufficient to meet the cost of the benefits. It is necessary to set aside a reserve to hold assets equal to the expected shortfall, which was 0.71% of pensionable salaries at the valuation date. For this reason a "Contribution Reserve" was introduced equal to the present value of the shortfall in terms of the Financial Services Board's Circular PF117.

RECOMMENDATIONS

Solvency Reserve

110. I recommend that the balance in the Pensions Memorandum Account be retained as a Solvency Reserve of R 991 492 000 as protection against adverse future experience.

111. I recommend that a Solvency Reserve be set up for active members as and when affordable.

Risk Reserve

112. I recommend that a Risk Reserve of R 153 886 000 be retained in line with PF117.

Contribution Reserve

113. I recommend that a Contribution Reserve of R 59 871 000 be set up in line with PF117.

Contribution rates and surcharges

114. I recommend that the current surcharge of 9.5% of pensionable salaries continue to be paid until the end of the period set out in the "Scheme to Eliminate Deficiency" towards building up a Solvency Reserve for protection of the Fund.

115. Once the surcharge ceases, the underlying rate of contribution will not be sufficient to meet the cost of the benefits. It is necessary to set aside a reserve to hold assets equal to the expected shortfall, which was 0.71% of pensionable salaries at the valuation date.

CONCLUSION

116. We have performed a statutory actuarial valuation of the Fund as at 31 March 2014. Our recommendations are summarised in paragraphs 110 to 115. We also draw the Trustees' attention to the matter of the 13^{th} pension cheque and Solvency Reserve as discussed in paragraph 102 to 109.

117. The valuation reveals that the Fund is 100% funded on the "best estimate" basis as at the valuation date, but that it is not fully funded on the "financial soundness" basis incorporating a Solvency Reserve.

118. I am satisfied that the asset composition on the valuation date is appropriate to the nature of the liabilities and that the investment strategy of the Fund is suitable for the Fund.

119. The Fund self-insures its risk benefits. The lump sum element of these benefits is relatively small, with the major element comprising of annuity payments. I am satisfied that, given the recommended Risk Reserve, the Fund's reinsurance arrangements are appropriate.

120. In my view the Fund is in a sound financial position as at the valuation date.

AR ELS (FIA FASSA CFP® CFA CERA)
VALUATOR

My primary professional regulator is
the Actuarial Society of South Africa

In my capacity as an employee of
ARGEN Actuarial Solutions

RIA VAN DER MERWE
ACTUARIAL CONSULTANT

In my capacity as an employee of
ARGEN Actuarial Solutions

October 2014

APPENDICES

APPENDIX 1: SUMMARY

A1.1. The key benefits and conditions of the Fund are summarised below. Importantly, this is only a summary of the Fund's regulations and in the event of any dispute the registered regulations will be the sole point of reference.

Definitions

Final Average Salary

A1.2. The average pensionable salary during the last year prior to retirement.

Pension age

A1.3. The pension age is 65 years (60 years for females at 31 July 1978 who did not elect 65 years)

Optional retiring date

A1.4. The date on which a member attains age 60 years

Bonus service included in continuous service

A1.5. One year for twenty completed years of continuous service and one year for every five completed years of continuous service thereafter

Normal retirement benefits

A1.6. At the pension age or optional retiring date a member is entitled to:

- A pension equal to 2.2% of final average salary for each year of continuous service; plus
- A gratuity equal to 8.25% of final average pensionable salaries per year of continuous service.

Early retirement benefits

A1.7. Members may retire up to seven years prior to the pension age. The same pension and gratuity as on normal retirement applies reduced in line with the tables in the regulations for each year that retirement precedes the optional retiring date.

Death in service prior to normal retirement age

Lump sum

A1.8. 10.75% of final average pensionable salaries per year of continuous service (minimum of one-quarter of annual pensionable salaries

Spouse's pension

A1.9. 1.2% of final average pensionable salaries per year of continuous service that the member would have had at the pension age.

Death in retirement

Lump sum on death in guarantee period

A1.10. 25% of the balance of five years' pension payments.

Spouse's pension

A1.11. 1.2% of final average pensionable salaries per year of continuous service.

Withdrawal benefits

A1.12. Member's contributions plus $^{5}/_{12}$% for each month of continuous service (the addition is approximately equivalent to compound interest at 10% a year) increased by 5% for each complete year of continuous service up to a maximum of 100% after 20 years of service; or if member has completed ten years of continuous service, a deferred pension and lump sum as for retirement at the pension age payable when he attains the pension age.

Ill Health retirement (more than 10 years of service)

Gratuity

A1.13. Lump sum as for retirement at the pension age (with minimum continuous service equal to one-half of the continuous service that the member would have had at the pension age)

Pension

A1.14. Pension as for retirement at the pension age (with minimum continuous service equal to one-half of the continuous service that the member would have had at the pension age)

Ill Health retirement (less than 10 years of service)

Gratuity

A1.15. Greater of two times member's contributions and resignation benefit

Contributions

A1.16. Members contribute at a rate of 9.25% of pensionable salaries.

A1.17. The local authorities contribute at a rate not lower than that which is determined by the actuary to be required to cover the balance of the cost of providing benefits.

Expenses

A1.18. The administration fees and related expenses are met by the Fund.

APPENDIX 2: DATA VERIFICATION

Data checks

A2.1. The following data checks were carried out by us:

- Reconciling the active membership during the valuation period;
- Testing for very high, low, nil or negative salary increases of individual members over the valuation period.
- Testing whether the ages and pensionable salaries of individual members were within a reasonable range.
- Ensuring that the age and past service of each member did not conflict with the minimum entry age.
- Testing the reasonability of each member's total/accumulated contributions relative to salary and length of service.
- Checking the level of pensions against the pensions at the previous valuation date and increases granted since then.
- Testing the reasonableness of age differences between pensioners and their spouses.
- Checking for changes in the membership details over the valuation period.
- Identifying any missing or invalid data fields.
- Reconciling the valuation data with the financial statements.

Findings

A2.2. The data checks performed by us did not highlight any reasons to regard the data as being unsuitable for valuation purposes.

A2.3. This is however not a guarantee that the data is completely reliable.

A2.4. We would like to thank the administrator for attending to our data queries in an efficient and prompt manner.

APPENDIX 3: VALUATION DATA

A3.1. The membership data as at 31 March 2014 are summarised in the tables below.

	31 March 2014	31 March 2011	Difference
Females			
Number	1 685	1 681	4
Annual salary			
- Total (R'000s)	312 163	261 735	19.3%
- Average (R's)	185 260	155 702	19.0%
Salary weighted avg			
- Age (years)	45.47	45.30	0.17
- Service (years)	14.25	13.60	0.65
Males			
Number	3 279	3 792	-513
Annual salary			
- Total (R'000s)	644 593	616 050	4.6%
- Average (R's)	196 582	162 460	21.0%
Salary weighted avg			
- Age (years)	48.71	47.30	1.41
- Service (years)	17.27	16.06	1.21

Age band	Members	Annual Salary		Liability		Service
		Total (R'000)	Average (R')	Total (R'000)	Average (R')	(years)
Females						
20 - 25	20	2 004	100 206	464	23 198	1.4
25 - 30	82	11 853	144 553	5 701	69 520	2.9
30 - 35	184	31 601	171 746	34 519	187 602	6.3
35 - 40	260	49 849	191 727	106 558	409 838	11.6
40 - 45	295	56 402	191 192	158 549	537 453	13.8
45 - 50	278	53 240	191 512	188 856	679 338	15.3
50 - 55	256	50 655	197 872	244 816	956 313	18.4
55 - 60	197	37 869	192 230	224 064	1 137 380	19.8
60 - 65	113	18 689	165 392	118 220	1 046 198	19.0
	1 685	**312 163**	**185 260**	**1 081 746**	**641 986**	**14.2**
Males						
20 - 25	10	1 216	121 611	368	36 844	1.7
25 - 30	67	10 190	152 088	4 929	73 561	2.6
30 - 35	180	25 100	139 446	32 834	182 412	6.8
35 - 40	433	75 004	173 219	164 652	380 259	10.6
40 - 45	590	112 722	191 055	364 656	618 060	14.3
45 - 50	579	117 292	202 577	529 533	914 564	17.9
50 - 55	616	132 595	215 252	719 911	1 168 687	19.5
55 - 60	483	103 182	213 626	709 711	1 469 381	22.3
60 - 65	321	67 292	209 633	527 457	1 643 169	23.0
	3 279	**644 593**	**196 582**	**3 054 051**	**931 397**	**17.3**
Total	**4 964**	**956 756**	**192 739**	**4 135 797**	**833 158**	**16.3**

These liabilities exclude the value of the pending spouses' liability

A3.2. We have reconciled the number of active members as follows during the valuation period:

Active members: 31 March 2011	5 473
New	597
Full transfers	- 88
Deferred	- 12
Retirement	- 417
Ill-health	- 86
Death	- 154
Resignation	- 295
Dismissal	- 54
Active members: 31 March 2014	4 964

A3.3. The pensioner data as at 31 March 2014 are summarised as follows:

	31 March 2014	31 March 2011	Difference
Deferred pensioners			
Number	108	107	1
Annual pension[1]			
- Total (R' 000s)	7 753	5 617	38.0%
- Average (R's)	71 787	52 495	36.7%
Pension weighted average age (yrs)	55.90	53.70	2.20
Children			
Number	1 737	1 491	246
Annual pension[1]			
- Total (R' 000s)	12 786	10 763	18.8%
- Average (R's)	7 361	7 219	2.0%
Pension weighted average age (yrs)	18.43	17.00	1.43
Widow/ers			
Number	1 578	1 485	93
Annual pension[1]			
- Total (R' 000s)	64 179	52 956	21.2%
- Average (R's)	40 671	35 661	14.1%
Pension weighted average age (yrs)	62.38	62.70	-0.32
Retirees			
Number	2 285	2 067	218
Annual pension[1]			
- Total (R' 000s)	171 374	119 810	43.0%
- Average (R's)	75 000	57 963	29.4%
Pension weighted average age (yrs)	68.18	67.30	0.88

1. The annual pensions include all pension increases up to 1 July 2013.

A3.4. The pensioner data and liabilities can be summarised as follows:

Females

Age band	Pensioners	Annual Pension		Liability	
		Total (R'000)	Average (R')	Total (R'000)	Average (R')
Deferred					
35 - 40	2	43	21 500	139	69 500
40 - 45	5	235	47 000	949	189 800
45 - 50	12	377	31 417	1 899	158 250
50 - 55	9	408	45 333	2 727	303 000
55 - 60	7	426	60 857	3 380	482 857
60 - 65	3	165	55 000	1 722	574 000
	38	**1 654**	**43 526**	**10 816**	**284 632**
Children					
0 - 5	9	100	11 111	1 007	111 889
5 - 10	57	576	10 105	4 251	74 579
10 - 15	155	1 755	11 323	8 321	53 684
15 - 20	204	2 262	11 088	2 748	13 471
20 - 25	175	1 368	7 817	1 224	6 994
25 - 30	125	255	2 040	225	1 800
30 - 35	62	29	468	25	403
> 35	32	422	13 188	383	11 969
	819	**6 767**	**8 263**	**18 184**	**22 203**

These liabilities exclude the value of the 1 July 2014 increase, the cost of the administration expenses and the cost of the 13th pension cheque (refer to Appendix 6)

Age band	Pensioners	Annual Pension		Liability	
		Total (R'000)	Average (R')	Total (R'000)	Average (R')
Widows					
< 45	163	7 474	45 853	131 377	805 994
45 - 50	107	4 854	45 364	79 252	740 673
50 - 55	112	4 618	41 232	70 947	633 455
55 - 60	122	5 337	43 746	75 418	618 180
60 - 65	169	7 205	42 633	91 454	541 148
60 - 65	152	6 212	40 868	69 443	456 862
65 - 70	152	5 752	37 842	54 759	360 257
70 - 75	135	5 165	38 259	40 719	301 622
75 - 80	123	5 195	42 236	32 048	260 553
80+	126	4 872	38 667	21 027	166 881
	1 361	**56 684**	**41 649**	**666 444**	**489 672**
Retirees					
< 45	6	317	52 833	5 655	942 500
45 - 50	8	436	54 500	7 399	924 875
50 - 55	14	775	55 357	12 308	879 143
55 - 60	45	2 908	64 622	42 343	940 956
60 - 65	118	7 435	63 008	97 677	827 771
65 - 70	192	10 940	56 979	129 653	675 276
70 - 75	145	6 054	41 752	64 861	447 317
75 - 80	106	4 271	40 292	38 073	359 179
80+	117	3 754	32 085	21 549	184 179
	751	**36 890**	**461 430**	**419 518**	**6 181 197**
Total	**2 969**	**101 995**	**554 868**	**1 114 962**	**6 977 703**

These liabilities exclude the value of the 1 July 2014 increase, the cost of the administration expenses and the cost of the 13th pension cheque (refer to Appendix 6).

Males

Age band	Pensioners	Annual Pension		Liability	
		Total (R'000)	Average (R')	Total (R'000)	Average (R')
Deferred					
35 - 40	2	49	24 500	140	70 000
40 - 45	4	149	37 250	519	129 750
45 - 50	8	967	120 875	4 256	532 000
50 - 55	12	903	75 250	5 228	435 667
55 - 60	18	1 780	98 889	13 718	762 111
60 - 65	26	2 251	86 577	23 673	910 500
	70	**6 099**	**87 129**	**47 534**	**679 057**
Children					
0 - 5	6	47	7 833	473	78 833
5 - 10	62	689	11 113	5 614	90 548
10 - 15	127	1 653	13 016	7 720	60 787
15 - 20	162	2 059	12 710	2 633	16 253
20 - 25	197	1 099	5 579	1 099	5 579
25 - 30	135	127	941	127	941
30 - 35	66	12	182	12	182
> 35	21	129	6 143	129	6 143
	776	**5 815**	**7 494**	**17 807**	**22 947**

These liabilities exclude the value of the 1 July 2014 increase, the cost of the administration expenses and the cost of the 13th pension cheque (refer to Appendix 6)

Age band	Pensioners	Annual Pension		Liability	
		Total (R'000)	Average (R')	Total (R'000)	Average (R')
Widowers					
< 45	3	334	111 333	5 470	1 823 333
45 - 50	7	329	47 000	4 936	705 143
50 - 55	6	201	33 500	2 732	455 333
55 - 60	1	13	13 000	168	168 000
60 - 65	7	290	41 429	3 177	453 857
60 - 65	4	145	36 250	1 407	351 750
65 - 70	8	176	22 000	1 393	174 125
70 - 75	5	92	18 400	595	119 000
75 - 80	2	51	25 500	267	133 500
80+	6	122	20 333	508	84 667
	49	**1 753**	**35 776**	**20 653**	**421 490**
Retirees					
< 45	20	1 025	51 250	18 001	900 050
45 - 50	28	1 868	66 714	31 415	1 121 964
50 - 55	46	2 432	52 870	39 665	862 283
55 - 60	134	12 899	96 261	184 745	1 378 694
60 - 65	242	26 324	108 777	342 817	1 416 599
65 - 70	467	44 796	95 923	525 900	1 126 124
70 - 75	269	21 200	78 810	224 611	834 985
75 - 80	166	11 889	71 620	106 558	641 916
80+	162	12 050	74 383	81 544	503 358
	1 534	**134 483**	**696 608**	**1 555 256**	**8 785 973**
Total	**2 429**	**148 150**	**827 006**	**1 641 250**	**9 909 467**

These liabilities exclude the value of the 1 July 2014 increase, the cost of the administration expenses and the cost of the 13th pension cheque (refer to Appendix 6)

The 310 pending pensioners have been excluded from the above.

A3.5. We have reconciled the number of pensioners as follows during the valuation period:

	Pensioners	Spouses	Children	Deferred pensioners	Total
Pensioners: 31 March 2011	**2 067**	**1 485**	**1 491**	**107**	**5 150**
New	506	312	265	12	1 095
Adjustments and cessations	- 3	- 84	- 14	- 9	- 110
Deaths	- 285	- 135	- 5	- 2	- 427
Pensioners: 31 March 2014	**2 285**	**1 578**	**1 737**	**108**	**5 708**
Of which					
Pending pensioners	0	168	142	0	310
Suspended pensioners	145	173	955	9	1 282

APPENDIX 4: VALUATION ASSUMPTIONS

General

A4.1. To assess the financial position of the Fund, it is necessary to make a realistic long-term estimate regarding each factor that affects the Fund. A number of factors are considered which are inter-related, often to such an extent that individual elements cannot be considered in isolation.

A4.2. The assumptions used for the valuation take into account the 31 March 2011 valuation assumptions, the experience of the Fund and the experience of similar funds.

A4.3. The actual long-term cost of the benefits depends on the actual experience of the Fund and not on the assumptions adopted. While the assumptions can affect the timing of the emerging cost in the short-term, they have little impact on the long-term cost.

A4.4. The Fund is required to earn a minimum rate of return on the assets in order to remain financially sound. Therefore projections were made of expected future benefit payments and future investment returns.

A4.5. In addition to holding assets to meet its liabilities, it is desirable that the Fund holds a Solvency Reserve in order to protect its financial soundness against volatility in the investment markets. A second valuation is thus performed for the defined benefit members in order to determine the level of the Solvency Reserve.

A4.6. The Fund was valued on two sets of valuation assumptions:

- The first set of assumptions is referred to as the valuation assumptions and is used in order to determine the basic liability which has been used for past valuations of the Fund. This is based on a set of "best estimate" assumptions which are expected to apply over the long-term. The benefits payable by the Fund in future are estimated and these are discounted using the assumed investment return, to give the present value of the liabilities for service to the valuation date. A similar approach is taken to pensions in payment.
- A second set of assumptions, referred to as the Solvency Reserve assumptions, is used in order to determine the Solvency Reserve. This set of valuation assumptions takes account of investment conditions at the valuation date. The benefits payable by the Fund in the future are estimated and these are discounted using the yield on Government Stock at the date of valuation. Allowance is made for inflation by reference to the yield on inflation-linked bonds at the valuation date.

A4.7. The assumptions underlying the valuations are set out and motivated below.

Inflation

Valuation assumption

A4.8. It was assumed that inflation over the long-term will be 6.0% per annum, which is within the level of the Reserve Bank's long term target inflation range.

A4.9. The absolute level of the inflation assumption is not critical to the valuation results. This is because all other assumptions are set in real terms (i.e. as an addition to inflation).

Solvency Reserve assumption

A4.10. At the valuation date the yield on medium to longer term fixed interest bonds was between 6.8% per annum and 8.9% per annum.

- The duration of the member liabilities is approximately 15 years and we have therefore used a yield of 9.10% per annum which corresponds to bonds with a 15 year term to maturity. The yield on inflation-linked bonds with a 15 year maturity was about 1.98% per annum. The difference of 7.12% per annum (9.10% less 1.98%) is the long term rate of inflation expected by the market at the valuation date. We have therefore assumed an underlying rate of inflation of 7.12% per annum for the member liabilities.
- The duration of the pensioner liabilities is approximately 12.25 years and we have therefore used a yield of 8.74% per annum which corresponds to bonds with a 12.25 year term to maturity. The yield on inflation-linked bonds with a 12.25 year maturity was about 1.87% per annum. The difference of 6.86% per annum (8.74% less 1.87%) is the long term rate of inflation expected by the market at the valuation date. We have therefore assumed an underlying rate of inflation of 6.86% per annum for the pensioner liabilities

Investment return

Valuation assumption

A4.11. The assumed investment return is used as an interest rate to discount expected future cash flows. In estimating the future investment earnings, greater emphasis is placed on the long-term trend as opposed to the short-term experience of the Fund.

A4.12. The Fund has a defined benefit liability in respect of a closed, aging group of defined benefit members and pensioners.

A4.13. We used the Fund's strategic asset allocation taken from the 30 September 2012 asset liability modelling exercise and therefore assumed that the Fund will have the following asset allocation at valuation date:

- 3% of the assets generate cash returns of, say, 6.5% per annum;
- 22% of the assets are invested in fixed interest stock yielding, say, 7.5% per annum;
- 10% of the assets are invested in listed property with an expected return of 9.5% per annum;
- 65% of the assets are invested in equities with an equity risk premium of 3.5% above the investment return on fixed interest stock so that earnings are

11.0% per annum. Historically the equity risk premium has at times exceeded 5%, but for the best estimate assumptions we have taken a long term view of an equity risk premium equal to 3.5%; and

A4.14. The calculated expected return on assets is approximately 9.95% per annum.

A4.15. The Fund's Investment Policy Statement states that the Fund targets inflation plus 5.0% per annum over the long term; however this is a stretched target, requiring additional returns from active asset management, which may or may not be realised. For purposes of the valuation it was decided not to take those extra returns into account.

A4.16. We have accordingly used a long term investment return assumption of 10% per annum.

Solvency Reserve assumption

A4.17. At the valuation date the yield on fixed interest bonds varied from 6.8% per annum at the short-term, increasing to 8.9% per annum at longer terms.

A4.18. The duration of the Fund's liabilities in respect of members is approximately 15 years and therefore it was decided to apply a rate of interest of 9.10% per annum. An adjustment was made for investment fees of 0.5% a year. For purposes of valuation it was thus assumed that the Fund would earn 8.60% (9.10% less 0.5%) and this was the rate used to place a value on the member liabilities of the Fund.

A4.19. The duration of the Fund's liabilities in respect of pensioners is approximately 12.25 years and therefore it was decided to apply a rate of interest of 8.74% per annum. An adjustment was made for investment fees of 0.5% a year. For purposes of valuation it was thus assumed that the Fund would earn 8.24% (8.74% less 0.5%) and this was the rate used to place a value on the pensioner liabilities of the Fund.

Salary increases

Valuation assumption

A4.20. We have allowed for future salary increases as a result of inflation at 1.0% per annum above inflation, that is at 7.0% per annum.

A4.21. In addition, we provided for merit and promotion increases, as shown in Table 1 below.

Solvency Reserve assumption

A4.22. Allowance was made for pensionable salaries to be increased in future at 1.0% per annum above the assumed rate of inflation (7.12% per annum), a total of 8.12% per annum subject to a cap of 1% below the interest rate assumption, i.e. capped at 7.60% (8.60% less 1.0%).

A4.23. In addition, we have allowed for merit and promotion increases as shown in Table 1 below.

Pension increases

Valuation assumption

A4.24. The Pension Increase Policy of the Fund states that pensions will be increased annually by at least 75% of the average increase in inflation or, if greater, the increase affordable out of the investment return earned on pensioner assets (subject to a maximum of

100% of inflation). "Affordability" is determined by investment earnings in excess of 5.0% per annum.

A4.25. Based on an assumed investment return of 10.0% per annum and inflation of 6.0% per annum, pension increases of 75% of inflation require a post retirement interest rate of 5.3% [1.10 divided by (1+0.75 times 0.06)]. In order to provide for at least 75% of inflation it was decided to use a post retirement rate of 5.0% per annum.

A4.26. The Trustees are satisfied that the assets underlying the Pensions Memorandum Account are expected to achieve a real return that is sufficient to allow the Fund to grant pension increases of at least 75% of inflation when combined with a 5.0% per annum post retirement interest rate. This view is supported by the results of the 30 September 2012 asset liability modelling exercise undertaken by the Fund.

Solvency Reserve assumption

A4.27. The implied inflation rate under the Solvency Reserve assumptions is 7.12% per annum for members (paragraph A4.10 above). A post-retirement rate of interest assumption of 2.75% per annum is therefore required to allow for pension increases of approximately 80% of inflation.

A4.28. The implied inflation rate under the Solvency Reserve assumptions is 6.86% per annum for pensioners (paragraph A4.10 above). A post-retirement rate of interest assumption of 2.60% per annum is therefore required to allow for pension increases of approximately 80% of inflation.

Withdrawals

A4.29. Withdrawals consist mainly of voluntary resignations and resignations to avoid dismissal. No special provision is made for exits such as retrenchments and transfers to other funds, since they are approximately financially neutral towards the Fund.

A4.30. Allowance was made for the prescribed minimum withdrawal benefits in terms of the Pension Funds Second Amendment Act. The outcome of these minimum benefits is that the Fund no longer makes material withdrawal profits in respect of members who leave the Fund prior to retirement.

A4.31. Over the valuation period the actual number of members that withdrew was in line with the assumptions of the previous statutory valuation. The valuation assumptions in the previous statutory valuation were therefore retained. Sample rates are set out in Table 2 below.

Mortality

A4.32. The previous statutory valuation assumptions were retained in respect of the pre-retirement mortality assumptions. The expected number of deaths exceeded the actual deaths over the valuation period, but looking at the experience of the Fund over a longer term (6 years) actual and expected numbers are close. This will be investigated at each interim valuation and updated if necessary.

A4.33. Post-retirement mortality is assumed to be in line with the PA(90) mortality table, rated down 1 year and allowing for future mortality improvements of 0.50% per annum from 2007 onwards, with an overall improvement in mortality of 10% after 20 years. The post-retirement mortality assumptions agree to the actual experience in the Fund and hence the previous assumption was retained. Sample mortality rates are set out in Table 4 below, before allowance for improvements.

Ill Health retirement

A4.34. The actual number of members retiring on account of ill-health prior to attaining the pensionable age was less than expected (actual ill health retirements were some 60% of that assumed). We revised the ill health retirement assumptions for both males and females to be more in line with the experience of the Fund.

A4.35. Sample rates are set out in Table 3 below.

Early retirement

A4.36. Members are able to retire from age 60 with no reduction in benefits on account of early retirement. Based on the actual experience of the Fund, it was decided to retain the assumption in the previous statutory valuation.

A4.37. Sample rates are set out in Table 5 below.

Family statistics and expenses

A4.38. We assumed that on average a husband will be 5 years older than his wife and that 100% of members have an eligible spouse.

A4.39. Expenses of administration are paid by the Fund and have therefore been included in the required contribution rate. Based on actual costs over the valuation period, we have allowed for expenses of 1.25% of pensionable salaries.

A4.40. In the case of current pensioners an allowance was made for expenses incurred in the payment of pensions. We have allowed for expenses to be incurred in the payment of pensions, at R 400 per pensioner per annum, increasing in future at the same rate as the pensions. This is in line with the level of expense that would apply if pensions were paid by an outside administrator

Prescribed minimum benefits

A4.41. The Fund determines the minimum benefits prescribed by the Act for defined benefit members on the 40% of Earnings Yield ("EY") basis.

A4.42. For each member the actuarial reserve was compared to the value of the minimum benefit that would become payable at each future date, if the member resigned from the service at that date. Where the latter figure exceeded the actuarial reserve, the difference was added to the liabilities of the Fund.

A4.43. For calculating the value of the Prescribed Minimum Benefit the following assumptions were applied:

- The deferred pension and gratuity is based on service to the valuation date;
- We expect the "40% EY" figures published by the Financial Services Board to average some 3% over the long term and we have therefore applied this figure in calculating the minimum benefit mentioned above;
- The pension will be payable from the member's normal retirement age;
- Pre- and post-retirement decrements are as set out above.

A4.44. For the Solvency Reserve the above is repeated using the actual Earnings Yield applicable at the valuation date.

A4.45. Additionally, the total actuarial reserve for each member at the valuation date was compared with the value of the minimum benefit at the valuation date based on the Earnings Yield published by the FSB at the valuation date, i.e. taking into account market conditions at the valuation date. The quantum of the additional calculation is shown in paragraph 61 of the main report.

A4.46. The Pension Funds Act prescribes minimum increases to pensioners. Each pension in payment must be compared to the pension at retirement increased by the full rate of inflation since date of retirement (if affordable). The last comparison in this regard was done as at 31 March 2011 and another comparison has been done as part of this valuation. Our recommendations are set out in the main report.

Changes in assumptions

A4.47. The valuation assumptions remain unchanged from those used in the 31 March 2011 actuarial valuation with the exception of:

- The provision for expenses for pensioners were increased from R350 to R400 per pensioner per annum;
- It was assumed that 100% of females have an eligible spouse. Previously it was assumed that 50% of females have an eligible spouse, with the liability for any parents' pensions being met indirectly by margins in the assumptions. For this valuation it was decided to allow explicitly for benefits to the parents of deceased members/pensioners by assuming all members to have an eligible spouse; and
- The ill-health rates for both males and females were revised to reflect actual Fund experience.

A4.48. The Solvency Reserve assumptions have been changed in line with the change in bond yields over the valuation period.

Table 1: Promotional salary scale

Age group	Promotional increase in excess of inflation
20	7.7%
25	2.9%
30	1.8%
35	0.7%
40	0.1%
45	0.0%
50	0.0%
55	0.0%
60	0.0%

Table 2: Withdrawal rates

Age group	Rate: Males	Rate: Females
22	20.00%	10.00%
27	12.00%	10.00%
32	8.00%	9.00%
37	5.00%	7.00%
42	3.00%	5.00%
47	1.00%	3.00%
52	0.00%	1.00%
57	0.00%	0.00%

Table 3: Ill Health retirement

Age group	Rate: Males	Rate: Females
32	0.10%	0.10%
37	0.20%	0.20%
42	0.30%	0.30%
47	0.40%	0.40%
52	1.00%	0.80%
57	1.90%	1.30%
62	2.90%	2.00%

Table 4: Mortality

Pre-retirement			Post-retirement		
Age group	Rate: Males	Rate: Females	Age group	Rate: Males	Rate: Females
20	0.10%	0.20%	60	1.50%	0.60%
25	0.30%	0.20%	65	2.30%	1.10%
30	0.40%	0.30%	70	3.50%	1.80%
35	0.60%	0.40%	75	5.40%	3.10%
40	0.80%	0.50%	80	8.30%	5.30%
45	1.20%	0.60%	85	12.30%	8.70%
50	1.80%	0.90%	90	18.00%	14.10%
55	2.70%	1.30%			
60	4.00%	1.90%			

Table 5: Early retirement

Age group	% of members retiring
To 59	0.0%
60	10.0%
61	5.0%
62	5.0%
63	5.0%
64	5.0%
65	100.0%

APPENDIX 5: VALUATION OF ASSETS

Asset composition

The value of the assets comprised as follows:

	Market value		Actuarial value		AV/MV
	R'000	% of	R'000	% of	
Equities[1]	4 433 411	49.68%	4 295 822	50.47%	96.90%
Interest bearing stock	2 399 798	26.89%	2 186 863	25.70%	91.13%
Cash and deposits	253 385	2.84%	253 385	2.98%	100.00%
International equities	1 945 277	21.80%	1 884 906	22.15%	96.90%
Property[1]	21 236	0.24%	19 113	0.22%	90.00%
Net current assets	- 129 253	-1.45%	- 129 253	-1.52%	100.00%
Total at 31 March 2013	**8 923 854**	**100.00%**	**8 510 836**	**100.00%**	**95.37%**

1 Property shares were valued similarly to equities and have been grouped under the equity category in the table above

Asset valuation basis

The actuarial value of the assets was determined as follows:

A5.1 Fixed interest assets were valued by calculating the discounted value of the expected cash flow, based on the valuation rate of interest of 10% p.a.

A5.2 The dividend yield on the ALSI was approximately 2.81% at the valuation date. We have accordingly assumed a dividend growth rate of inflation plus 1.1%, i.e. at 7.1% per annum. If taken together with the assumed investment return of 10% per annum this means that we assume a dividend yield of 2.9% per annum, leading to equities being valued at 97% of market value.

A5.3 International assets were valued similarly to local assets invested in equities.

A5.4 Cash and net current assets are taken at face value.

A5.5 Property was valued at 90% of market value.

A5.6 It was assumed that the mix of investments in other assets was similar to the mix in the balance of the Fund.

APPENDIX 6: VALUATION OF LIABILITIES

Accrued service

The value of the liabilities of the Fund for the service of members and former members to the valuation date was as follows:

	31 March 2014 R'000	31 March 2011 R'000
Active members		
Benefits on :		
retirement	2 192 525	1 749 985
death	889 252	730 495
ill-health	679 829	702 581
withdrawal	175 884	164 568
past bonus service	198 307	109 806
Pending pensioners	43 642	53 414
Subtotal	**4 179 439**	**3 510 849**
Pensioners		
Former members	1 910 329	1 344 761
Spouses	655 255	520 548
Children	31 536	29 411
Suspended pensioners	104 129	53 238
Deferred pensioners	54 967	39 888
Pension increases[1]	149 184	79 367
13th cheque[2]	21 341	15 134
Pensions Administration cost	18 311	14 637
Subtotal	**2 945 052**	**2 096 984**
Total liabilities	**7 124 491**	**5 607 833**

1 The increase at 31 March 2014 includes a provision for the prescribed minimum increase as well as the 1 July 2014 pension increase.

2 These liabilities refer to the 13th pension cheque in the year following the valuation dates only.

Future service

Expressed as a contribution rate, and allowing for the fact that the Fund is closed to new members, the future service liability is as follows:

	% of pensionable salaries	
	31 March 2014	**31 March 2011**
Retirement	15.96%	14.66%
Disability	4.20%	5.15%
Death in service	6.43%	6.30%
Withdrawal	1.50%	1.60%
Bonus service	2.25%	1.92%
Administration costs	1.25%	1.25%
Total	31.59%	30.88%

APPENDIX 7: SENSITIVITY ANALYSIS

A7.1 The Fund's financial position is sensitive to the key assumptions made in the valuation. The key assumptions are the investment return, salary increase rate and pensioner mortality. All these elements are beyond the direct control of the Fund. A sensitivity analysis is performed at each statutory valuation of the Fund to show the impact of changes in each of these key assumptions on the Fund's financial position.

A7.2 To help the Trustees understand the impact of a change in the assumptions of the Fund, we have also calculated the liabilities based on the following assumptions:

- A post-retirement mortality assumption of PA(90) without any age adjustment and without any allowance for improvements in mortality; and
- A reduction of 0.5% in the post retirement interest rate (from 5.0% to 4.5% per annum).

A7.3 The results are as follows:

	Members R' 000s	Pensioners R' 000s
1. Post-retirement mortality: PA(90)		
Liability: Sensitivity run assumptions	4 084 037	2 855 266
Liability:Valuation assumptions	4 179 439	2 945 052
Difference	95 402	89 786
2. Post-retirement interest rate of 4.5%		
Liability: Sensitivity run assumptions	4 338 058	3 082 148
Liability:Valuation assumptions	4 179 439	2 945 052
Difference	- 158 619	- 137 096

A7.4 It is seen that the valuation results are sensitive to the valuation assumptions used.

A7.5 It is important to note that the valuation assumptions do not determine the cost of the benefits. The actual long-term cost of the benefits depends on the actual experience of the Fund and not on the assumptions adopted. While the assumptions can affect the timing of the emerging cost in the short-term, they have little impact on the long-term cost.

A7.6 To assess the financial position of the Fund, and the resulting pace of funding, it is however preferable to make a realistic long-term estimate regarding each factor that affects the Fund. For that reason, the valuation assumptions are compared to the experience of the Fund at every statutory actuarial valuation and updated if necessary.

APPENDIX 8: EXPERIENCE ANALYSIS

A7.1. At each statutory triennial valuation the reasons for the change in the surplus/shortfall is investigated. This provides the Trustees with a quantitative measurement of the Fund's changing financial condition.

	R'000s
Deficit as at 31 March 2011	- 549 533
Interest on deficit	- 97 825
Investment experience	708 895
Salary increases	- 53 557
Demographic experience	- 55 803
Contributions: surcharge	307 396
Expenses	- 7 584
Reserve profit/loss	- 186 719
Basis change	- 81 360
Miscellaneous	16 090
Deficit as at 31 March 2014	0

A7.2. The above items are discussed further below

Investment experience

A7.3. The expected investment return per the valuation assumptions is 10.0% per annum. The actual investment return earned on the assets based on the actuarial value of assets was higher than the assumption for each year over the valuation period (see paragraph 37 of the main report). The higher than expected return results in a surplus of about R 708 895 000.

A7.4. Interest on the deficit at the previous valuation resulted in a loss of some R 97 825 000.

Salary increases

A7.5. The expected salary increase per the valuation assumptions is 7.0% per annum plus a promotional salary scale. The actual salary increase for members were as set out in paragraph 16 of the main report. The higher than expected salary increases resulted in a strain of about R 53 557 000.

Demographic experience

A7.6. The actual benefits paid out over the valuation period amounted to more than the expected reserves to be released and this resulted in a strain of about R 55 803 000.

Contribution surcharge

A7.7. The additional contributions paid to the Fund during the valuation period to fund the deficit, resulted in a gain of some R 307 396 000.

Expenses

A7.8. An allowance of 1.25% of pensionable salaries is made to cover expenses. Actual expenses were higher than allowed for, resulting in a loss of some R 7 584 000.

Reserves

A7.9. Changes in the risk reserve and reserve for pending pensioners resulted in a profit. This was offset by the increase in the solvency reserve resulting in an overall strain of R 186 719 000.

Basis change

A7.10. Changes were made to the valuation assumptions as set out in Appendix 4. These changes resulted in a strain of some R 81 360 000.

Miscellaneous

A7.11. There were several other sources of profit and loss, but the amount in each case was too small to justify separate calculation. It was assumed for convenience that together they represent a net profit of R 16 090 000.

APPENDIX 9: LIMITATIONS TO USE OF REPORT

This report has been prepared for the Trustees of the Natal Joint Municipal Pension Fund (Superannuation). Its contents and conclusions should not be used by any other party, as the purpose for which this report has been prepared may not be appropriate for other uses.

A third party who wishes to use the information, conclusions, recommendations or any other aspects of this report should contact the Trustees of the Natal Joint Municipal Pension Fund (Superannuation) who will in turn obtain written comment from ARGEN Actuarial Solutions on whether this report is appropriate for the intended use.

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