# REPORT TO THE TRUSTEES OF THE NATAL JOINT MUNICIPAL PENSION FUND (RETIREMENT) (12/8/6676/2) ON THE INTERIM ACTUARIAL VALUATION AS AT 31 MARCH 2014

**(Based on audited Financial Statements)**

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CONTENTS

## EXECUTIVE SUMMARY

1. At the request of the Fund's Trustees, we have performed an interim actuarial valuation of the Natal Joint Municipal Pension Fund (Retirement) ("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 2012 and was accepted by the Financial Services Board ("FSB") on 27 March 2013. An interim valuation was performed as at 31 March 2013 ("the previous valuation date") and this report was also submitted to the FSB in terms of the agreements underlying the "Scheme to Eliminate Deficiency".

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 2013 | Difference |
|---|---|---|---|
| Number | 2 811 | 3 120 | -309 |
| Annual salary | | | |
| - Total (R'000s) | 316 653 | 325 281 | -2.7% |
| - Average (R's) | 112 648 | 104 257 | 8.0% |
| Salary weighted average | | | |
| - Age (years) | 50.91 | 50.34 | 0.57 |
| - Service (years) | 21.55 | 20.85 | 0.70 |

**Pensioners**

| | 31 March 2014 | 31 March 2013 | Difference |
|---|---|---|---|
| Number[1] | 5 462 | 5 324 | 138 |
| Annual pension[2] | | | |
| - Total (R'000s) | 104 443 | 91 669 | 13.9% |
| - Average (R's) | 19 122 | 17 218 | 11.1% |
| Pension weighted average | | | |
| - Age (years) | 61.26 | 60.68 | 0.58 |

1. Includes 836 suspended and 425 pending pensioners as at 31 March 2013 and 1 050 suspended and 406 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 3 271 065 000 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 2013 R'000 |
|---|---|---|
| Market value of assets | 3 271 065 | 2 766 872 |
| Investment Reserve | - 150 955 | - 931 |
| Actuarial value of assets | 3 120 110 | 2 765 941 |

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

| | 31 March 2014 | 31 March 2013 |
|---|---|---|
| **Required rate** | | |
| Accrued benefits | 24.23% | 24.00% |
| Expenses | 1.64% | 1.64% |
| Total | 25.87% | 25.64% |
| **Actual rate** | | |
| Local Authorities | 18.37% | 18.37% |
| Members | 7.00% | 7.00% |
| Total | 25.37% | 25.37% |
| Shortfall/excess in contributed rate | -0.50% | -0.27% |
| **Surcharge** | | |
| Local Authorities | 15.85% | 15.85% |
| Members | 1.65% | 1.65% |
| Total | 17.50% | 17.50% |

6. The results above show that the contributions from members and the local authorities at the valuation date are less than the theoretical required contribution rate for future service benefits. The position will be reviewed at the next statutory valuation of the Fund as at 31 March 2015 and if necessary, appropriate action will be recommended.

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 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.

8. The required contribution rate currently allows for expenses of 1.64% of pensionable salaries. During the valuation period, the actual expenses of the Fund amounted to about 3% of pensionable salaries, but this includes extraordinary expenses in respect of the Rationalisation of the Regulations project. However, even after allowing for these extraordinary expenses, the total expenses of the Fund is still higher as a percentage of pensionable salaries, than the expenses of the Natal Joint Municipal Pension Fund

(Superannuation) and the Kwa-zulu Natal Joint Municipal Provident Fund on the same basis.

9. We have been advised that the administrator reviewed the distribution of the expenses between the three funds and revised the allocation with effect from 1 April 2014. We will monitor the expenses and if the trend continues the required rate of contribution from local authorities may have to be increased correspondingly.

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

| | 31 March 2014 R'000 | 31 March 2013 R'000 |
|---|---|---|
| **Memorandum Account: Pensioners** | | |
| **Assets:** | **1 755 485** | **1 516 021** |
| **Liabilities and Reserves:** | | |
| Accrued liability[1] | 1 339 663 | 1 207 317 |
| Risk Reserve | 34 323 | 29 251 |
| Solvency Reserve: balance of assets | 381 499 | 279 453 |
| | **1 755 485** | **1 516 021** |
| **Surplus/(Deficit)** | **0** | **0** |
| **Funding level (after Solvency Reserve)** | **100.0%** | **100.0%** |
| Funding level (before Solvency Reserve) | 127.8% | 122.6% |
| **Active members** | | |
| **Assets:** | **1 364 625** | **1 249 920** |
| **Liabilities and Reserves:** | | |
| Accrued liability | 1 453 872 | 1 419 236 |
| Risk Reserve | 34 780 | 34 444 |
| | **1 488 652** | **1 453 680** |
| **Surplus/(Deficit)** | **- 124 027** | **- 203 760** |
| **Funding level** | **91.7%** | **86.0%** |
| **Total Fund** | | |
| **Total assets** | **3 120 110** | **2 765 941** |
| **Total liablities, reserves and accounts** | **3 244 137** | **2 969 701** |
| **Total Surplus/(Deficit)** | **- 124 027** | **- 203 760** |
| **Funding level** | **96.2%** | **93.1%** |

1 Includes liability for pension increase at 1 July 2014 and 13th cheque at November 2014

11. In the main body of the report (see paragraph 101 to 107), we draw the Trustees' attention to the following matters:

11.1 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.

11.2 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.

11.3 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.

11.4 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.

11.5 The liability in respect of active members is 91.7% funded and we expect that the surcharge will eliminate the deficit within the time period allowed by the FSB. However, the Fund does not hold a Solvency Reserve in respect of the active members, so that it has little protection against adverse experience. We recommend that, once the deficit is eliminated, the surcharge continues to be paid for a period towards building up a Solvency Reserve.

11.6 Pensions in payment were increased by 4.8% with effect from 1 November 2013 from the reserves in the Pensions Memorandum Account. The excess assets in the Pensions Memorandum Account enabled the Fund to grant this increase to bring the pensions in payment at that date in line with those of the Natal Joint Municipal Pension Fund (Superannuation). The increase was derived as the ratio of the pension accrual rates between the funds (i.e. 2.2/2.1-1).

11.7 The above increase has resulted in pensioners at 1 November 2013 receiving pensions comparable with pensions of the Natal Joint Municipal Pension Fund (Superannuation), but not new retirees. We recommend that, as soon as the deficit in the Fund is eliminated, the Trustees investigate the possibility of also increasing the retirement benefits to align those with the Natal Joint Municipal Pension Fund (Superannuation).

12. 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.

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

13.1 The Fund is 96.2% funded as at the valuation date at the overall level. The pensioner liabilities are fully funded and the liabilities in respect of active members are 91.7% funded. The financial position of the Fund has thus improved since the previous valuation date.

13.2 I recommend that the surcharge continue to be paid in terms of the "Scheme to Eliminate Deficiency" to firstly eliminate the shortfall and then to build up sufficient solvency reserves.

13.3 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.

13.4 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.

14. In my view the Fund is not in a sound financial position as at the valuation date but the surcharge being paid is expected to restore the Fund to a sound financial condition within the period permitted by the FSB.

**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 an interim actuarial valuation of the Natal Joint Municipal Pension Fund (Retirement) ("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 2012 and was accepted by the Financial Services Board ("FSB") on 27 March 2013.
4. An interim valuation was performed as at 31 March 2013 ("the previous valuation date") and was also submitted to the FSB in terms of the agreements underlying the "Scheme to Eliminate Deficiency" in terms of Section 18 of the Pension Funds Act.
5. The 1 year period between the valuation dates is referred to as the "valuation period".
6. The Fund is registered in terms of the Pension Funds Act and approved by the South African Revenue Services for Income Tax purposes.
7. 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

8. The 31 March 2013 interim actuarial valuation report made the following recommendations:
   - 8.1 That the local authorities continue paying the surcharge of 17.5% of pensionable salaries. The payment continued during the valuation period; and
   - 8.2 That a Risk Reserve be maintained for both active and pensioner liabilities and that a Solvency Reserve be maintained for pensioner liabilities. These reserves were maintained during the valuation period.
9. The above recommendations were accepted by the Fund's Trustees and implemented.
10. The 31 March 2013 interim actuarial valuation report also recommended that the administrator carry out an investigation into a more equitable expense allocation between the three funds under administration. Changes, in this regard, will be made with effect from 1 April 2014.

### Purpose of the interim actuarial valuation

11. The purpose of this interim actuarial valuation is:
    - 11.1 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;
    - 11.2 To analyse the change in the financial position of the Fund during the valuation period;
    - 11.3 To determine the contribution rate that is required in order to fund the future benefits of the members;

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

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

11.6 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;

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

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

12. This report is an interim actuarial valuation report and as such a copy of this report does not normally have to be submitted to the Registrar of Pension Funds. However, in terms of the "Scheme to Eliminate Deficiency" the Registrar must be furnished with all interim valuation reports performed for the Fund, and hence a copy of this report will be submitted to the Registrar's office.

**Developments during and subsequent to the valuation period**

13. The Pension Increase Policy of the Fund is summarised as follows:

13.1 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;

13.2 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;

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

13.4 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.

14. The Trustees granted a 13$^{th}$ pension cheque to pensioners in November of 2013 and of 2014.

15. The following pension increases were granted since the previous statutory valuation:

| Date | Pension Increase | CPI for year to 31 March | Average CPI for year to previous 31 Dec |
|---|---|---|---|
| 1 July 2012[2] | 5.04% | 6.0% | 4.99% |
| 1 July 2013 | 5.66% | 5.9% | 5.66% |
| 1 November 2013[1] | 4.80% | | |
| 1 July 2014 | 5.75% | 6.0% | 5.75% |

1. Special once off increase (refer paragraph 103)
2. Included in the liabilities for the previous statutory valuation

16. The average salary increase for members who were present as at both valuation dates was 8.09% per annum.

17. Members and local authorities contributed 7% and 18.37% of pensionable salaries respectively during the valuation period.

18. A total surcharge of 17.5% of pensionable salaries was paid from during the valuation period. Of the surcharge, 1.65% of pensionable salaries are paid by members who joined the Fund prior to 1 July 2002.

**Regulations and amendments**

19. Since the last valuation date the Fund has undertaken a mandatory Rationalisation of its Regulations project. The Fund is governed by Regulations that is both promulgated by the provincial authorities and registered by the FSB. The Rationalisation project is in its final stages and the revised Regulations is expected to be submitted for promulgation and registration in the period after the valuation date.

20. 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.

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

**Professional guidance**

22. 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. The one exception is that no sensitivity analysis has been done to ascertain the effect on the liabilities of changes in the valuation assumptions; this is done at each statutory valuation.

## FUND STRUCTURE

23. 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.

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

25. 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.

26. 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.

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

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

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

## VALUATION INFORMATION

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

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

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

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

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

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

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

32. 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.

33. The valuation was based on the audited financial statements of the Fund.

### Membership data

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

| | 31 March 2014 | 31 March 2013 | Difference |
|---|---|---|---|
| **Females** | | | |
| Number | 466 | 507 | -41 |
| Annual salary | | | |
| - Total (R'000s) | 47 567 | 48 206 | -1.3% |
| - Average (R's) | 102 075 | 95 081 | 7.4% |
| Salary weighted avg | | | |
| - Age (years) | 49.30 | 48.60 | 0.70 |
| - Service (years) | 17.39 | 16.70 | 0.69 |
| **Males** | | | |
| Number | 2 345 | 2 613 | -268 |
| Annual salary | | | |
| - Total (R'000s) | 269 086 | 277 075 | -2.9% |
| - Average (R's) | 114 749 | 106 037 | 8.2% |
| Salary weighted avg | | | |
| - Age (years) | 51.19 | 50.65 | 0.55 |
| - Service (years) | 22.28 | 21.58 | 0.70 |

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

**Pensioner data**

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

| | 31 March 2014[2] | 31 March 2013[2] | Difference |
|---|---|---|---|
| **Deferred pensioners** | | | |
| Number | 33 | 41 | -8 |
| Annual pension[1] | | | |
| - Total (R' 000s) | 738 | 830 | -11.1% |
| - Average (R's) | 22 364 | 20 244 | 10.5% |
| Pension weighted average age (yrs) | 59.10 | 59.59 | -0.49 |
| **Widow/ers** | | | |
| Number | 3 759 | 3 666 | 93 |
| Annual pension[1] | | | |
| - Total (R' 000s) | 54 330 | 47 874 | 13.5% |
| - Average (R's) | 14 453 | 13 059 | 10.7% |
| Pension weighted average age (yrs) | 55.32 | 54.57 | 0.75 |
| **Retirees** | | | |
| Number | 1 670 | 1 617 | 53 |
| Annual pension[1] | | | |
| - Total (R' 000s) | 49 375 | 42 965 | 14.9% |
| - Average (R's) | 29 566 | 26 571 | 11.3% |
| Pension weighted average age (yrs) | 67.82 | 67.50 | 0.32 |

1. Including pension increases to 1 July 2013
2. Includes 836 suspended and 425 pending pensioners as at 31 March 2013 and 1 050 suspended and 406 pending pensioners as at 31 March 2014.

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

**Revenue account**

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

| | Year ending 31 March 2014 R'000 |
|---|---|
| **Value of assets at 31 March 2013 (AFS)** | **2 766 872** |
| **Income** | |
| Contributions: | |
| - Members | 22 648 |
| - Local authorities | 81 136 |
| - Surcharge | 67 388 |
| Transfers in | 2 174 |
| Investment returns | 572 038 |
| | **745 384** |
| **Outgo** | |
| Lump sum benefits: | |
| - Divorces | - 1 404 |
| - Withdrawal | - 11 719 |
| - Retirement | - 16 841 |
| - Retrenchment | 0 |
| - Death | - 16 855 |
| - Transfer to other funds | - 60 388 |
| Pensions | - 110 181 |
| Other | 0 |
| Investment managers' fees | - 14 133 |
| Administration expenses | - 9 670 |
| | **- 241 191** |
| **Value of assets at 31 March 2014 (AFS)** | **3 271 065** |

39. Over the valuation period, the Fund earned 20.35% and 14.89% on its assets taken at market value and actuarial value respectively.

**Assets per financial statements**

40. 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 | 867 713 | 26.5% |
| Collective investment schemes | | 0.0% |
| Equities | 1 525 114 | 46.6% |
| Property | 114 867 | 3.5% |
| Cash and Deposits | 117 508 | 3.6% |
| | **2 625 202** | **80.3%** |
| **Foreign** | | |
| Bills, bonds and securities | 1 188 | 0.0% |
| Equities | 723 849 | 22.1% |
| | **725 037** | **22.2%** |
| Current assets | 12 885 | 0.4% |
| Current liabilities | - 74 811 | -2.3% |
| Unclaimed benefits | - 17 248 | -0.5% |
| | **- 79 174** | **-2.4%** |
| **Total assets** | **3 271 065** | **100.0%** |

**Investment strategy**

41. 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% |

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

43. 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 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

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

### Valuation method

45. 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*

46. 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 also allowed for an administration fee of R 400 per annum in respect of each pension payable.

47. 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 assets that are directly attributable to its pensioners and deferred pensioners, 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.

48. We have been provided with information in respect of 1 050 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 |

49. We have been provided with details of 406 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 33 294 000 has been included in the Members' liabilities and R 3 074 000 in the pensioner liabilities in respect of spouses of pensioners. This matter will be monitored at each valuation and the figure of 50% adjusted appropriately.

*Future service*

50. 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.

51. 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:

    51.1 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; or

    51.2 such as is currently the case, there is a large deficit in the Fund. The excess contributions that would have been allocated to these reserves is currently used to fund the deficit, resulting in a higher required contribution rate to fund future benefits.

52. 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.

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

*Solvency Reserve*

54. 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.

55. To determine the Solvency Reserve, the same valuation method as set out in paragraphs 46 to 49 above is used, but the financial assumptions are based on the prevailing risk free rates of interest (see paragraph 68 below). Any resulting increase in the past service liability is held as a Solvency Reserve.

56. 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.

*Risk Reserve*

57. 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.

58. 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.

*Minimum Benefits*

59. 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 (paragraph A4.40 to A4.42).

60. 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 77 982 000 would arise at the valuation date if the Fund is terminated at that date.

61. It would be prudent to include the latter amount in a Solvency Reserve in the Fund but, in view of the current deficit in the Fund, and the fact that the Fund is an ongoing fund, no Solvency Reserve was held in respect of the additional liability above at the valuation date. This will be reviewed at each future actuarial valuation of the Fund, taking into account the Fund's financial condition at that time.

62. The Fund has prepared a "Scheme to Eliminate Deficiency" in terms of Section 18 of the Pension Funds Act that aims to eliminate the deficit by 2020 or earlier. This scheme was approved by the FSB. Members who exit the Fund in the interim receive the full value of their benefits set out in the regulations, subject to a minimum of the prescribed minimum benefit.

63. 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 2012. The next investigation in this regard will be performed as part of the statutory actuarial valuation of the Fund at 31 March 2015.

*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.

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

    65.1 Investment returns of 10.0% per annum;

    65.2 Price inflation of 6.0% per annum;

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

    65.4 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 .

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

67. The demographic assumptions are set out in Appendix 4. 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 2012 are still valid and were retained for this valuation.

68. 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:

    68.1 For members:

        68.1.1 Investment returns of 8.37% per annum;

        68.1.2 Price inflation of 6.93% per annum;

        68.1.3 Salary increases of 7.37% per annum, plus a promotional salary scale; and

        68.1.4 Allowance for future pension increases equal to investment returns in excess of 2.70% per annum;

    68.2 For pensioners:

        68.2.1 Investment returns of 8.34% per annum;

        68.2.2 Price inflation of 6.91% per annum;

        68.2.3 Allowance for future pension increases equal to investment returns in excess of 2.65% per annum.

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

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

71. 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

72. 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.

73. 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.

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

| | **31 March 2014 R'000** | **31 March 2013 R'000** |
|---|---|---|
| Market value of assets | 3 271 065 | 2 766 872 |
| Investment Reserve | - 150 955 | - 931 |
| Actuarial value of assets | 3 120 110 | 2 765 941 |

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

## VALUATION RESULTS

### Accrued assets and liabilities

76. The results of the valuation are summarised below:

| | 31 March 2014 R'000 | 31 March 2013 R'000 |
|---|---|---|
| **Memorandum Account: Pensioners** | | |
| **Assets:** | **1 755 485** | **1 516 021** |
| **Liabilities and Reserves:** | | |
| Accrued liability[1] | 1 339 663 | 1 207 317 |
| Risk Reserve | 34 323 | 29 251 |
| Solvency Reserve: balance of assets | 381 499 | 279 453 |
| | **1 755 485** | **1 516 021** |
| **Surplus/(Deficit)** | **0** | **0** |
| **Funding level (after Solvency Reserve)** | **100.0%** | **100.0%** |
| Funding level (before Solvency Reserve) | 127.8% | 122.6% |
| **Active members** | | |
| **Assets:** | **1 364 625** | **1 249 920** |
| **Liabilities and Reserves:** | | |
| Accrued liability | 1 453 872 | 1 419 236 |
| Risk Reserve | 34 780 | 34 444 |
| | **1 488 652** | **1 453 680** |
| **Surplus/(Deficit)** | **- 124 027** | **- 203 760** |
| **Funding level** | **91.7%** | **86.0%** |
| **Total Fund** | | |
| **Total assets** | **3 120 110** | **2 765 941** |
| **Total liablities, reserves and accounts** | **3 244 137** | **2 969 701** |
| **Total Surplus/(Deficit)** | **- 124 027** | **- 203 760** |
| **Funding level** | **96.2%** | **93.1%** |

1 Includes liability for pension increase at 1 July 2014

77. The Fund is 96.2% funded as at the valuation date at the overall level. The pensioner liabilities are fully funded and the liabilities in respect of active members are 91.7% funded.

## Pensioner liabilities

78. The Pensions Memorandum Account comprises the funds held to pay each pension that has 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 the assets in the Account is as follows:

| | **31 March 2014 R'000** | **31 March 2013 R'000** |
|---|---|---|
| Opening balance | 1 516 021 | 1 267 380 |
| Pensions paid | - 110 181 | - 90 162 |
| Capital value of new pensioners | 123 885 | 128 103 |
| Investment adjustments | 225 760 | 210 700 |
| Closing balance | 1 755 485 | 1 516 021 |

79. The value of the liabilities in respect of pensioners amounts to R 1 339 663 000 as at the valuation date. The value of the liabilities includes the pension increase as at 1 July 2014 and the cost of the 13$^{th}$ pension cheque in November 2014.

80. The Pension Increase Policy includes an allowance for a 13$^{th}$ pension cheque to be paid to pensioners subject to affordability. In the previous interim valuation, we included an allowance for payment of the 13$^{th}$ 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 13$^{th}$ 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 13$^{th}$ pension cheque with the Trustees in a meeting in October 2014. Further detail is provided in paragraphs 101 to 107.

81. The Pensions Memorandum Account is 100% funded after allowing for the Risk Reserve as set out in paragraph 90 below, as well as the funding of the Solvency Reserve as discussed in paragraph 87.

## Member liabilities

82. The funding level in respect of the active members improved from 86% to 92.1% over the valuation period.

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

84. Members and the local authorities are paying the surcharge in terms of the "Scheme to Eliminate Deficiency" that was approved by the FSB; this is to return the Fund to a 100% funded position within the period permitted by the FSB.

**Solvency Reserve**

85. 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.

86. 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 | 2 064 624 | 1 600 339 |
| Liability:Valuation assumptions | 1 453 872 | 1 339 663 |
| Investment reserve | 66 022 | 84 932 |
| Solvency Reserve | 544 730 | 175 744 |

87. As regards to pensioners, the balance of the assets in the Pensions Memorandum Account amount to R 381 499 000. The full theoretical Solvency Reserve for the pensioners is some R 175 744 000. 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.

88. With regards to the active members, the liabilities exceed the assets so that no funds are available at this stage towards retaining a Solvency Reserve for the active members. I do recommend however, that the Trustees aim towards establishing a Solvency Reserve once the deficit has been eliminated.

**Risk Reserve**

89. 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.

90. We have allowed for such a Reserve, comprising R 34 323 000 in respect of pensioners and R 34 780 000 in respect of active members.

91. At the valuation date the total Risk Reserve therefore amounts to R 69 103 000 calculated in accordance with paragraph 4.4 of Circular PF117.

## CONTRIBUTION RATES

### Members

92. Members contribute towards the Fund at a rate of 7.0% of pensionable salaries.

93. The local authorities meet the balance of the cost of providing benefits to the defined benefit members. Local authorities contributed at 18.37% during the valuation period.

94. 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 2013 |
|---|---|---|
| **Required rate** | | |
| Accrued benefits | 24.23% | 24.00% |
| Expenses | 1.64% | 1.64% |
| Total | 25.87% | 25.64% |
| **Actual rate** | | |
| Local Authorities | 18.37% | 18.37% |
| Members | 7.00% | 7.00% |
| Total | 25.37% | 25.37% |
| Shortfall/excess in contributed rate | -0.50% | -0.27% |
| **Surcharge** | | |
| Local Authorities | 15.85% | 15.85% |
| Members | 1.65% | 1.65% |
| Total | 17.50% | 17.50% |

95. The results above show that the contributions from members and the local authorities at the valuation date are 0.50% less than the required contribution rate for future service.

96. 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 position will be reviewed at the next statutory actuarial valuation of the Fund as at 31 March 2015.

97. 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.

98. The required contribution rate currently allows for expenses of 1.64% of pensionable salaries. During the valuation period, the actual expenses of the Fund amounted to about 3% of pensionable salaries, but this includes extraordinary expenses in respect of the Rationalisation of the Regulations project. However, even after allowing for these extraordinary expenses, the total expenses of the Fund is still higher as a percentage of

pensionable salaries, than the expenses of the Natal Joint Municipal Pension Fund (Superannuation) and the Kwa-zulu Natal Joint Municipal Provident Fund on the same basis.

99. We have been advised that the administrator reviewed the distribution of the expenses between the three funds and revised the allocation with effect from 1 April 2014. We will monitor the expenses and if the trend continues the required rate of contribution from local authorities may have to be increased correspondingly.

**EXPERIENCE ANALYSIS**

100. At each statutory triennial valuation the reasons for the change in the surplus/shortfall are investigated. No such analysis is usually performed for an interim valuation, but because this report is to be submitted to the FSB, we have included the analysis in Appendix 7. This provides the Trustees with a quantitative measurement of the Fund's changing financial condition.

**OBSERVATIONS**

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

102. The liability in respect of active members is 91.7% funded and we expect that the surcharge will eliminate the deficit within the time period allowed by the FSB. However, the Fund does not hold a Solvency Reserve in respect of the active members, so that it has little protection against adverse experience. We recommend that, once the deficit is eliminated, the surcharge continues to be paid for a period towards building the Solvency Reserve.

103. Pensions in payment were increased by 4.8% with effect from 1 November 2013 from the reserves in the Pensions Memorandum Account. The excess assets in the Pensions Memorandum Account enabled the Fund to grant this increase to bring the pensions in payment at that date in line with that of the Natal Joint Municipal Pension Fund (Superannuation). The increase was derived as the ratio of the pension accrual rates between the funds (i.e. 2.2/2.1-1).

103.1 The above increase has resulted in pensioners at 1 November 2013 receiving pensions comparable with pensions of the Natal Joint Municipal Pension Fund (Superannuation), but not new retirees. We recommend that, as soon as the deficit in the Fund is eliminated, the Trustees investigate the possibility of also increasing the retirement benefits to align those with the Natal Joint Municipal Pension Fund (Superannuation).

104. The Pension Increase Policy includes an allowance for a 13$^{th}$ pension cheque to be paid to pensioners subject to affordability. In the previous interim valuation, we included an allowance for payment of the 13$^{th}$ 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 13$^{th}$ pension cheque each year but does not guarantee such payment.

105. This was done as payment of the 13$^{th}$ 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 13$^{th}$ pension cheque and be subsidised by assets in the Pensions Memorandum Account.

106. A preliminary report on this valuation was discussed at the Trustee meeting in October 2014. The costs of funding for the 13$^{th}$ 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 13$^{th}$ pension cheque should not be funded for in the valuation since it was not guaranteed and would not be affordable.

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

## RECOMMENDATIONS

### Solvency Reserve for pensioners

108. I recommend that the balance in the Pensions Memorandum Account be retained as a Solvency Reserve of R 381 499 000 as protection against adverse future experience.

### Risk Reserve

109. I recommend that a Risk Reserve of R 69 103 000 be retained in line with PF117.

### Contribution rates and surcharges

110. The contributions from members and the local authorities at the valuation date are 0.5% less than the required contribution rate for future service. I recommend that the current rate continue to be paid until the next statutory valuation of the Fund at 31 March 2015 at which time the position will be reviewed. In the interim the shortfall will be met from the surcharge (see below).

111. We have been advised that the administrator reviewed the distribution of the expenses between the three funds and revised the allocation with effect from 1 April 2014. We will monitor the expenses and if the trend continues the required rate of contribution from local authorities will have to be increased correspondingly at the next statutory valuation.

112. The surcharge of 17.5% of pensionable salaries is expected to eliminate the deficit in the Fund by 2020 and I recommend that this continue to be paid.

## CONCLUSION

113. We have performed an interim actuarial valuation of the Fund as at 31 March 2014. Our recommendations are summarised in paragraphs 108 to 112. We also draw the Trustees' attention to the matter of the 13$^{th}$ pension cheque as discussed in paragraphs 104 to 107.

114. The Fund is 96.2% funded as at the valuation date at the overall level. The pensioner liabilities are fully funded. The liabilities in respect of active members are 91.7% funded.

115. 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.

116. 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.

117. In my view the Fund is not in a sound financial position as at the valuation date but the surcharge being paid is expected to restore the Fund to a sound financial condition within the period permitted by the FSB.

**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 for all members

### Normal retirement benefits

A1.4. At the pension age a member is entitled to:

- A pension equal to 2.1% of final average salary for each year of continuous service; plus
- A gratuity equal to 5.5% of final average pensionable salaries per year of continuous service.

### Early retirement benefits

A1.5. 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 of early retirement.

### Death in service prior to normal retirement age

*Lump sum*

A1.6. The member's annual pensionable salary is payable

*Spouse's pension*

A1.7. 1.05% of final average pensionable salaries per year of continuous service at date of death and 75% of potential service to the pension age.

### Death in retirement

*Guarantee period*

A1.8. The retiree's pension is guaranteed for a period of five years from the date of retirement.

*Spouse's pension*

A1.9. 1.05% (0.77% for pensioners who retired before 1 July 1999) of final average pensionable salaries per year of continuous service.

**Withdrawal benefits**

A1.10. 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*

A1.11. Same as for normal retirement

*Pension*

A1.12. Same as for normal retirement

**Ill Health retirement (less than 10 years of service)**

*Gratuity*

A1.13. The greater of the resignation benefit or twice the member's contributions

**Contributions**

A1.14. Members contribute at a rate of 7% of pensionable salaries, plus a surcharge of 1.65% of pensionable salaries in respect of members who were members at 30 June 2002.

A1.15. 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**

A1.16. 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 2013 | Difference |
|---|---|---|---|
| **Females** | | | |
| Number | 466 | 507 | -41 |
| Annual salary | | | |
| - Total (R'000s) | 47 567 | 48 206 | -1.3% |
| - Average (R's) | 102 075 | 95 081 | 7.4% |
| Salary weighted avg | | | |
| - Age (years) | 49.30 | 48.60 | 0.70 |
| - Service (years) | 17.39 | 16.70 | 0.69 |
| **Males** | | | |
| Number | 2 345 | 2 613 | -268 |
| Annual salary | | | |
| - Total (R'000s) | 269 086 | 277 075 | -2.9% |
| - Average (R's) | 114 749 | 106 037 | 8.2% |
| Salary weighted avg | | | |
| - Age (years) | 51.19 | 50.65 | 0.55 |
| - Service (years) | 22.28 | 21.58 | 0.70 |

| Age band | Members | Annual Salary | | Liability | | Service |
|---|---|---|---|---|---|---|
| | | Total (R'000) | Average (R') | Total (R'000) | Average (R') | (years) |
| **Females** | | | | | | |
| 25 - 30 | 9 | 968 | 107 541 | 276 | 30 681 | 2.6 |
| 30 - 35 | 13 | 1 846 | 141 996 | 1 653 | 127 191 | 7.3 |
| 35 - 40 | 38 | 5 150 | 135 528 | 8 089 | 212 879 | 11.5 |
| 40 - 45 | 52 | 6 492 | 124 839 | 13 579 | 261 138 | 13.7 |
| 45 - 50 | 81 | 8 362 | 103 234 | 23 656 | 292 046 | 16.6 |
| 50 - 55 | 120 | 11 116 | 92 631 | 41 919 | 349 324 | 19.9 |
| 55 - 60 | 83 | 7 185 | 86 564 | 35 847 | 431 891 | 23.3 |
| 60 - 65 | 70 | 6 449 | 92 122 | 36 095 | 515 640 | 21.1 |
| | **466** | **47 567** | **102 074** | **161 115** | **345 739** | **17.4** |
| **Males** | | | | | | |
| 25 - 30 | 12 | 1 582 | 131 808 | 430 | 35 795 | 2.0 |
| 30 - 35 | 31 | 2 991 | 96 493 | 3 919 | 126 424 | 8.5 |
| 35 - 40 | 127 | 15 773 | 124 196 | 37 477 | 295 094 | 14.1 |
| 40 - 45 | 303 | 37 253 | 122 946 | 117 639 | 388 249 | 17.6 |
| 45 - 50 | 482 | 55 885 | 115 944 | 224 114 | 464 967 | 21.2 |
| 50 - 55 | 582 | 66 004 | 113 409 | 316 568 | 543 931 | 23.8 |
| 55 - 60 | 460 | 51 140 | 111 174 | 285 233 | 620 071 | 25.1 |
| 60 - 65 | 348 | 38 459 | 110 513 | 274 083 | 787 596 | 27.3 |
| | **2 345** | **269 086** | **114 749** | **1 259 463** | **537 085** | **22.3** |
| **Total** | **2 811** | **316 653** | **112 648** | **1 420 579** | **505 364** | **21.5** |

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 2013 | 3 120 |
| | |
| New | 20 |
| Reinstated | 1 |
| | |
| Transfer to Superannuation Fund | - 9 |
| Transfer to KZN Pension Fund | - 97 |
| Transfer to Provident | 0 |
| Retirement | - 94 |
| Ill-health | - 28 |
| Death | - 70 |
| Resignation | - 21 |
| Dismissal | - 11 |
| | |
| Active members: 31 March 2014 | 2 811 |

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

| | 31 March 2014[2] | 31 March 2013[2] | Difference |
|---|---|---|---|
| **Deferred pensioners** | | | |
| Number | 33 | 41 | -8 |
| Annual pension[1] | | | |
| - Total (R' 000s) | 738 | 830 | -11.1% |
| - Average (R's) | 22 364 | 20 244 | 10.5% |
| Pension weighted average age (yrs) | 59.10 | 59.59 | -0.49 |
| **Widow/ers** | | | |
| Number | 3 759 | 3 666 | 93 |
| Annual pension[1] | | | |
| - Total (R' 000s) | 54 330 | 47 874 | 13.5% |
| - Average (R's) | 14 453 | 13 059 | 10.7% |
| Pension weighted average age (yrs) | 55.32 | 54.57 | 0.75 |
| **Retirees** | | | |
| Number | 1 670 | 1 617 | 53 |
| Annual pension[1] | | | |
| - Total (R' 000s) | 49 375 | 42 965 | 14.9% |
| - Average (R's) | 29 566 | 26 571 | 11.3% |
| Pension weighted average age (yrs) | 67.82 | 67.50 | 0.32 |

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** | | | | | |
| | **8** | **183** | **22 875** | **1 480** | **185 000** |
| **Widows** | | | | | |
| < 45 | 370 | 8 936 | 24 151 | 155 563 | 420 441 |
| 45 - 50 | 349 | 7 416 | 21 249 | 121 033 | 346 799 |
| 50 - 55 | 487 | 8 906 | 18 287 | 136 377 | 280 035 |
| 55 - 60 | 464 | 7 277 | 15 683 | 102 930 | 221 832 |
| 60 - 65 | 506 | 7 018 | 13 870 | 89 515 | 176 907 |
| 60 - 65 | 438 | 4 613 | 10 532 | 52 167 | 119 103 |
| 65 - 70 | 323 | 2 846 | 8 811 | 27 285 | 84 474 |
| 70 - 75 | 210 | 1 158 | 5 514 | 9 180 | 43 714 |
| 75 - 80 | 112 | 589 | 5 259 | 3 751 | 33 491 |
| 80+ | 66 | 317 | 4 803 | 1 525 | 23 106 |
| | **3 325** | **49 076** | **14 760** | **699 326** | **210 324** |
| **Retirees** | | | | | |
| 50 - 55 | 6 | 194 | 32 333 | 2 991 | 498 500 |
| 55 - 60 | 16 | 409 | 25 563 | 5 801 | 362 563 |
| 60 - 65 | 30 | 853 | 28 433 | 11 012 | 367 067 |
| 65 - 70 | 67 | 2 150 | 32 090 | 24 959 | 372 522 |
| 70 - 75 | 67 | 1 576 | 23 522 | 15 709 | 234 463 |
| 75 - 80 | 44 | 796 | 18 091 | 6 662 | 151 409 |
| 80+ | 56 | 342 | 6 107 | 2 019 | 36 054 |
| | **286** | **6 320** | **22 098** | **69 153** | **241 794** |
| **Total** | **3 619** | **55 579** | **15 358** | **769 959** | **212 755** |

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** | | | | | |
| | **25** | **380** | **15 200** | **3 332** | **133 280** |
| **Widowers** | | | | | |
| < 45 | 3 | 175 | 58 333 | 2 773 | 924 333 |
| 45 - 50 | 6 | 121 | 20 167 | 1 710 | 285 000 |
| 55 - 60 | 3 | 17 | 5 667 | 207 | 69 000 |
| 60 - 65 | 7 | 113 | 16 143 | 1 155 | 165 000 |
| 60 - 65 | 2 | 39 | 19 500 | 365 | 182 500 |
| 65 - 70 | 3 | 25 | 8 333 | 174 | 58 000 |
| 75 - 80 | 2 | 2 | 1 000 | 12 | 6 000 |
| 80+ | 2 | 4 | 2 000 | 11 | 5 500 |
| | **28** | **496** | **17 714** | **6 407** | **228 821** |
| **Retirees** | | | | | |
| 45 - 50 | 25 | 731 | 29 240 | 11 518 | 460 720 |
| 50 - 55 | 40 | 1 356 | 33 900 | 20 200 | 505 000 |
| 55 - 60 | 67 | 2 574 | 38 418 | 34 109 | 509 090 |
| 60 - 65 | 193 | 7 203 | 37 321 | 89 167 | 462 005 |
| 65 - 70 | 401 | 17 641 | 43 993 | 188 753 | 470 706 |
| 70 - 75 | 276 | 8 464 | 30 667 | 83 358 | 302 022 |
| 75 - 80 | 164 | 3 465 | 21 128 | 28 896 | 176 195 |
| 80+ | 218 | 1 621 | 7 436 | 10 573 | 48 500 |
| | **1 384** | **43 055** | **31 109** | **466 574** | **337 120** |
| **Total** | **1 437** | **43 931** | **30 571** | **476 313** | **331 463** |

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 406 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 | Deferred pensioners | Total |
|---|---|---|---|---|
| **Pensioners: 31 March 2013** | **1 617** | **3 666** | **41** | **5 324** |
| New | 119 | 138 | 1 | 258 |
| Adjustments and cessations | 2 | - 21 | - 8 | - 27 |
| Deaths | - 68 | - 24 | - 1 | - 93 |
| **Pensioners: 31 March 2014** | **1 670** | **3 759** | **33** | **5 462** |
| **Of which** | | | | |
| Pending pensioners | 0 | 406 | 0 | 406 |
| Suspended pensioners | 379 | 668 | 3 | 1 050 |

## 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 2012 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 13.5 years and we have therefore used a yield of 8.87% per annum which corresponds to bonds with a 13.5 year term to maturity. The yield on inflation-linked bonds with a 13.5 year maturity was about 1.94% per annum. The difference of 6.93% per annum (8.87% less 1.94%) 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 6.93% per annum for the member liabilities.
- The duration of the pensioner liabilities is approximately 13.25 years and we have therefore used a yield of 8.84% per annum which corresponds to bonds with a 13.25 year term to maturity. The yield on inflation-linked bonds with a 13.25 year maturity was about 1.93% per annum. The difference of 6.91% per annum (8.84% less 1.93%) 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 6.91% 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 <u>members</u> is approximately 13.5 years and therefore it was decided to apply a rate of interest of 8.87% 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 8.37% (8.87% 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 <u>pensioners</u> is approximately 13.25 years and therefore it was decided to apply a rate of interest of 8.84% 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 8.34% (8.84% 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 (6.93% per annum), a total of 7.93% per annum subject to a cap of 1% below the interest rate assumption, i.e. capped at 7.37% (8.37% 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 <u>at least</u> 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 6.93% per annum for <u>members</u> (paragraph A4.10 above). A post-retirement rate of interest assumption of 2.70% 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 6.91% per annum for <u>pensioners</u> (paragraph A4.10 above). A post-retirement rate of interest assumption of 2.65% 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. The valuation assumptions in the previous statutory valuation were retained. Sample rates are set out in Table 2 below.

**Mortality**

A4.32. The previous statutory valuation assumptions were retained with the exception of the post-retirement mortality for females.

A4.33. The previous valuation assumed that post-retirement mortality will be in line with the PA(90) mortality table, rated down 1 years allowing for future mortality improvements of 0,50% per annum from 2007 onwards, with an overall improvement in mortality of

10% after 20 years with an additional age rating of +1 year for females and +2 years for males. We have removed the additional age rating for females to be in line with the actual experience of the Fund. Sample mortality rates are set out in Table 4 below, without any allowance for improvements.

A4.34. The mortality assumptions for all active members agree to the actual experience in the Fund. Sample mortality rates are set out in Table 4 below.

**Ill Health retirement**

A4.35. We have allowed for members to retire on account of ill-health prior to attaining the pensionable age. We have retained the assumptions used for the last statutory valuation for all active members in the Fund.

A4.36. Sample rates are set out in Table 3 below.

**Family statistics and expenses**

A4.37. We assumed that on average a husband will be 5 years older than his wife and that 100% of members have an eligible spouse.

A4.38. Expenses of administration are paid by the Fund and have therefore been included in the required contribution rate. Actual costs over the valuation period were about 3% of pensionable salaries, but included extraordinary expenses relating to the Rationalisation project. We will monitor the expenses and if the trend continues the required rate of contribution from local authorities will have to be increased correspondingly. For purposes of this valuation we have retained the allowance for expenses of 1.64% of pensionable salaries from the previous statutory valuation of the Fund.

A4.39. 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**

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

A4.41. 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.

A4.42. 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.

A4.43. For the Solvency Reserve the above is repeated using the actual Earnings Yield applicable at the valuation date.

A4.44. 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 60 of the main report.

A4.45. 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 2012 and another comparison will be done at the next statutory valuation of the Fund as at 31 March 2015.

**Changes in assumptions**

A4.46. The valuation assumptions remain unchanged from those used in the 31 March 2013 actuarial valuation with the exception of the change in the post-retirement mortality for females as set out above (see paragraph A4.33).

A4.47. 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 |
|---|---|---|
| 30 | 0.04% | 0.10% |
| 35 | 0.10% | 0.20% |
| 40 | 0.20% | 0.30% |
| 45 | 0.40% | 0.40% |
| 50 | 0.70% | 0.70% |
| 55 | 1.10% | 1.30% |
| 60 | 1.60% | 2.00% |
| 65 | 2.25% | 2.80% |

**Table 4: Mortality**

| Pre-retirement | | | Post-retirement | | |
|---|---|---|---|---|---|
| Age group | Rate: Males | Rate: Females | Age group | Rate: Males | Rate: Females |
| 20 | 1.10% | 0.40% | 60 | 1.80% | 0.60% |
| 25 | 1.30% | 0.50% | 65 | 2.70% | 1.00% |
| 30 | 1.70% | 0.60% | 70 | 4.20% | 1.60% |
| 35 | 2.10% | 0.80% | 75 | 6.40% | 2.80% |
| 40 | 2.70% | 1.10% | 80 | 9.70% | 4.70% |
| 45 | 3.20% | 1.50% | 85 | 14.40% | 7.90% |
| 50 | 3.70% | 2.10% | 90 | 20.90% | 12.90% |
| 55 | 5.00% | 3.10% | | | |
| 60 | 5.60% | 4.50% | | | |
| 65 | 6.90% | 6.10% | | | |

## 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] | 1 632 789 | 49.92% | 1 582 116 | 50.71% | 96.90% |
| Property[1] | 7 192 | 0.22% | 6 473 | 0.21% | 90.00% |
| Interest bearing stock | 868 901 | 26.56% | 791 803 | 25.38% | 91.13% |
| Cash and deposits | 117 508 | 3.59% | 117 508 | 3.77% | 100.00% |
| International equities | 723 849 | 22.13% | 701 385 | 22.48% | 96.90% |
| Net current assets | - 79 174 | -2.42% | - 79 175 | -2.54% | 100.00% |
| **Total at 31 March 2014** | **3 271 065** | **100.00%** | **3 120 110** | **100.00%** | **95.39%** |

1 Property shares have been valued as equities and have been included in the equity category in the above table

### 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 2013 R'000** |
|---|---|---|
| **Active members** | | |
| **Benefits on :** | | |
| retirement | 745 198 | 701 431 |
| death | 462 629 | 467 787 |
| ill-health | 180 860 | 179 302 |
| withdrawal | 31 891 | 35 961 |
| Pending pensioners | 33 294 | 34 755 |
| **Subtotal** | **1 453 872** | **1 419 236** |
| **Pensioners** | | |
| Former members | 492 301 | 432 200 |
| Spouses | 657 738 | 576 314 |
| Suspended pensioners | 92 977 | 67 777 |
| Deferred pensioners | 4 737 | 5 212 |
| Pension increases | 63 064 | 105 579 |
| 13th cheque | 8 704 | 0 |
| Pensions Administration cost | 20 142 | 20 235 |
| **Subtotal** | **1 339 663** | **1 207 317** |
| **Total liabilities** | **2 793 535** | **2 626 553** |

The pension increases above at 31 March 2014 refers to the cost of the 1 July 2014 increase. The corresponding figure at 31 March 2013 includes both the 1 July 2013 increase as well as the 1 November 2013 special increase.

**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 2013** |
| Retirement | 12.84% | 12.42% |
| Disability | 2.54% | 2.53% |
| Death in service | 8.25% | 8.39% |
| Withdrawal | 0.61% | 0.66% |
| Administration costs | 1.64% | 1.64% |
| **Total** | 25.87% | 25.64% |

## APPENDIX 7: EXPERIENCE ANALYSIS

A7.1. At each statutory triennial valuation the reasons for the change in the surplus/shortfall is investigated. No such analysis is usually performed for an interim valuation, but because this report is to be submitted to the FSB, we have included the analysis below. This provides the Trustees with a quantitative measurement of the Fund's changing financial condition.

| | R'000s |
|---|---|
| Deficit as at 31 March 2013 | - 203 761 |
| Interest on deficit | - 20 376 |
| Investment experience | 60 420 |
| Salary increases | - 12 655 |
| Demographic experience | - 26 683 |
| Contributions: surcharge | 120 376 |
| Expenses | - 4 577 |
| Basis change | - 13 758 |
| Miscellaneous | - 23 011 |
| Surplus as at 31 March 2014 | - 124 026 |

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 is estimated to be 15.37% per annum based on the actuarial value of assets. The higher than expected return results in a surplus of about R 60 420 000.

A7.4. Interest on the deficit at the previous valuation date amounted to a strain of R 20 376 000.

### Salary increases

A7.5. The expected salary increase per the valuation assumptions is 7.12% per annum (including the promotional salary scale). The actual salary increase for members present as at both valuation dates was 8.09% per annum. The higher than expected salary increases resulted in a strain of about R 12 655 000.

### 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 26 683 000.

**Contribution surcharge**

A7.7. The additional contributions paid to the Fund as a surcharge during the valuation period to fund the deficit, amounted to a gain of some R 120 376 000. This includes payment of "excessive salary surcharges".

**Expenses**

A7.8. An allowance of 1.64% of pensionable salaries is made to cover expenses. Actual expenses were higher than allowed for, resulting in a loss of some R 4 577 000.

**Basis change**

A7.9. A change was made to the post-retirement mortality assumption for females. This change resulted in a strain of some R 13 758 000.

**Miscellaneous**

A7.10. 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 strain of R 23 011 000.

**APPENDIX 8: LIMITATIONS TO USE OF REPORT**

This report has been prepared for the Trustees of the Natal Joint Municipal Pension Fund (Retirement). 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 (Retirement) 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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