



**NATAL JOINT MUNICIPAL PENSION
FUND (RETIREMENT) (12/8/6676/2)
REPORT ON THE STATUTORY ACTUARIAL
VALUATION AS AT 31 MARCH 2009**

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**NATAL JOINT MUNICIPAL PENSION FUND (RETIREMENT)
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31 MARCH 2009**

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PART A : EXECUTIVE SUMMARY

1. We have performed a statutory actuarial valuation of the Natal Joint Municipal Pension Fund (Retirement) (the “Fund”) as at 31 March 2009 (“the valuation date”). This report must be submitted to the Financial Services Board (“FSB”) within 12 months of the valuation date. The previous statutory valuation of the Fund was performed as at 31 March 2006 and the report on that valuation was lodged with the Financial Services Board. Interim actuarial valuations were also performed as at 31 March 2007 and 31 March 2008.
2. At the valuation date (and at the previous statutory valuation date) the Fund covered the following membership:

	31 March 2006		31 March 2009	
	Number	Annual salaries/ pension R'000	Number	Annual salaries/ pension R'000
Active members	5 737	302 317	4 318	305 932
Pensioners	5 150	43 074	5 682	55 770

3. The market value of the Fund’s assets was R 1 454 900 000 at the valuation date.
4. The valuation of the Fund has been performed on two alternative approaches:
 - 4.1 Firstly the “Discounted Cash Flow” (DCF) valuation basis has been used. Under this basis a value is placed on the liabilities of the Fund using long-term “best estimate” assumptions, details of which are given in the main body of the report. A value is placed on the assets of the Fund applying assumptions that are consistent with those used to value the liabilities, based on the expected future investment cash flow.
 - 4.2 Secondly, a “Discontinuance Method Approach” (“DMA”) basis has been used. Under this basis the assets are taken at full market value and the rate of interest used for valuing the liabilities is based on the yield curve and the yield on inflation-linked stock at the valuation date. Details of the underlying assumptions are given in the main body of the report.
5. Both methods have advantages and disadvantages:
 - 5.1 The value placed on the assets under the DCF method can be quite different from the market value of the assets and thus this method can be seen as giving somewhat artificial results. However, it has the advantage that the results on this basis tend to be stable from valuation to valuation despite volatile investment conditions, because of the long term nature of the assumptions made.

- 5.2 The alternative valuation basis gives results that can be volatile from valuation to valuation. However it has the advantage of appearing “realistic” because the assets are taken at market value and the assumptions are based on investment conditions prevailing at the valuation date.
6. The purpose of providing the results of two valuations is to give the Committee of Management an indication of the sensitivity of the valuation results to the assumptions. In this report we have used the results of the DCF valuation, because of its relative stability, in order to determine the Fund’s liabilities. The results of the DMA valuation are shown so that the Committee is aware of the position if the Fund were to be discontinued and the liabilities bought out in the market at the prevailing interest rates.
7. The value placed on the assets for purposes of the valuation are:

	DCF Method		DMA Method
	31.03.2006	31.03.2009	31.03.2009
	R'm	R'm	R'm
Assets at market value	1 147,7	1 454,9	1 454,9
Less: Investment Reserve	<u>(139,4)</u>	<u>212,7</u>	<u>-</u>
Actuarial value of assets	<u>1 008,3</u>	<u>1 667,6</u>	<u>1 454,9</u>

It is noted that, for the DCF valuation at 31 March 2009, an actuarial adjustment of R 212,7 million was made to the market value of the assets so that assets have been taken at R 1 667,6 million for this method of valuation.

8. The statutory actuarial valuation as at 31 March 2000 disclosed that the Fund was in shortfall (the “2000 valuation shortfall”). As required by the Pension Funds Act, a “Scheme of Arrangement” was implemented so that the shortfall would be funded over the nine year period 1 July 2001 to 30 June 2010. The initial surcharge has been reviewed at each annual actuarial valuation.
9. With effect from 1 July 2000 the local authorities commenced paying a surcharge equal to 2% of pensionable salaries. The surcharge has been increased as follows:

With effect from	Surcharge*
1.07.2002	6%
1.07.2004	12%
1.07.2006	14%
1.07.2007	17%

* 1,65% is paid by members

10. Based on the valuation assumptions that applied in 2000, (“the 2000 valuation”) the shortfall is fully funded as at the valuation date.
11. At each statutory triennial valuation the Fund’s actual experience is compared to the valuation assumptions and where necessary, the assumptions are revised. Our investigation disclosed that the mortality assumption for pensioners was not in line with actual experience and hence the assumption was changed for this valuation. For active members our investigation also

disclosed that the mortality and ill-health assumptions for females and the withdrawal assumption for males were not in line with experience and those assumptions were changed for this valuation. Details are given in Appendix 4.

12. On the revised valuation assumptions, a continuation of the current surcharge of 17% of pensionable salaries is required for 5 years after June 2010 to return the funding level to 100%.
13. The valuation disclosed the following funding levels in respect of the liabilities for service to the valuation date:

	DCF Method		DMA Method
	31.03.2006	31.03.2009	31.03.2009
	R'm	R'm	R'm
Total			
Value of assets (Appendix 5)	1 008,3	1 667,6	1 454,9
Value of liabilities (Appendix 6)	(1 077,7)	(1 660,4)	(2 154,9)
Minimum pension Increase Reserve	(63,4)	(134,1)	(0,0)
Risk Reserve	(37,2)	(51,8)	(51,8)
Contribution Reserve	<u>(34,8)</u>	<u>(35,5)</u>	<u>(35,5)</u>
Surplus (shortfall)	<u><u>(204,8)</u></u>	<u><u>(214,2)</u></u>	<u><u>(787,3)</u></u>
Funding level	83,1%	88,6%	64,9%

14. On the DCF method the funding level has improved. This is mainly due to better than expected investment earnings on the actuarial value of assets over the three-year valuation period as well as the surcharge that is being paid.
15. It is noted that the DMA method of valuation discloses a much greater shortfall of R 787,3 million. This indicates what the results would be if the Fund were to buy out its liabilities with an outside financial institution that invests only in risk-free investments. The calculation is based on investment conditions at the valuation date, so that the results can be very volatile from valuation to valuation. For purposes of determining the Fund's financial condition the results of the DCF method of valuation has been applied.

16. The valuation disclosed a surplus of R 134,1 million in respect of pensioners and a shortfall of R 214,2 million in respect of members, as follows:

	DCF Method		DMA Method
	31.03.2006	31.03.2009	31.03.2009
	R'm	R'm	R'm
<u>Memorandum Account (Pensioners)*</u>			
Assets	455,2	835,4	728,8
Liabilities	(380,9)	(684,5)	(839,7)
Risk Reserve	<u>(10,9)</u>	<u>(16,8)</u>	<u>(16,8)</u>
Surplus (Shortfall)**	<u>63,4</u>	<u>134,1</u>	<u>(127,7)</u>
Funding level	116,2%	119,1%	85,1%

Members

Balance of assets	553,1	832,2	726,1
Balance of liabilities***	(696,8)	(975,9)	(1 315,2)
Risk Reserve	(26,3)	(35,0)	(35,0)
Contribution Reserve	<u>(34,8)</u>	<u>(35,5)</u>	<u>(35,5)</u>
Surplus (Shortfall)	<u>(204,8)</u>	<u>(214,2)</u>	<u>(659,6)</u>
Funding level	73,0%	79,5%	52,4%

* The operation of the Memorandum Account is explained in detail in a separate report. The liabilities for the pensioners include an allowance for the pension increase on 1 July 2009.

** This amount is retained to provide for minimum pension increases.

*** Including allowance for death-in-service pending spouse's pensions.

17. The Fund's financial condition has improved, with the overall funding level increasing from 83,1% to 88,6% on the DCF method of valuation. The reasons for this are:

17.1 The Fund earned greater than expected investment returns on the actuarial value of assets over the three-year valuation period.

17.2 The Local Authorities paid the surcharge into the Fund over the valuation period.

This was partly offset by the following two points:

17.3 The valuation basis was strengthened in accordance with actual experience of the Fund.

17.4 Salary increases were higher than expected. From the data it is noted that the average salary increases over the valuation period were 10,0% per annum, which is higher than inflation over that period.

- 18 The Regulations of the Fund have been amended with effect from 1 July 2004, so that the Committee of Management is able to levy a separate surcharge on local authorities which grant excessive salary increases, thereby causing a financial strain on the Fund to the detriment of other stakeholders. An investigation into the surcharges due in this regard was done as at 31 March 2006. Another investigation will be performed as at 31 March 2009.

- 19 It must be borne in mind, however, that the surcharge may need to be increased if salary increases continue to exceed inflation.
- 20 The Pension Funds 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 investigation for this Fund was done as at 31 March 2006. Over the three years since then, pensions were increased by 18,84% while CPI increased by 27,32%. An additional increase of 7,14% is therefore due to pensioners as the Memorandum Account is in surplus and such increase is affordable. 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 7,14% is payable, backdated to 1 July 2009. We recommend that pensions be increased as required by the Act, backdated to 1 July 2009. The cost of the increase is included in the liabilities for this valuation.
- 21 Contributions payable to the Fund at the valuation date, including the surcharge, expressed as a percentage of the pensionable salaries, are as follows:

	%	%
by members - basic	7,00	
- additional*	<u>1,65</u>	8,65
by the local authorities - basic	13,65	
- additional*	<u>15,35</u>	<u>29,00</u>
Total		<u>37,65</u>

* Only in respect of members who were members at 30 June 2002.

- 22 The Employers are no longer permitting members to join the Fund, so that it is effectively closed to new members. This means that the average age will increase over time which, in turn, means that the required rate of contribution will also increase. Therefore the "Attained Age" method of calculating the required rate of contribution has been used for this valuation. This method determines a level rate of contribution that is required to be paid over the remaining service lifetime of the members. This method was also used in the last statutory valuation of the Fund as at 31 March 2006.
- 23 Excluding the surcharge, the "basic" contribution payable to the Fund is equal to 20,65% of pensionable salaries. Based on the DCF method of valuation, the basic contribution rate is less than the contribution rate required for future service by 2,3% of pensionable salaries, as reflected below:

	31 March 2006	31 March 2009
	%	%
Method of valuation	Attained Age	Attained Age
Contribution rate currently payable excluding surcharge	20,65	20,65
Members	7,00	7,00
Employer	<u>13,65</u>	<u>13,65</u>
Contribution rate required for future service	<u>22,06</u>	<u>22,95</u>
Excess/(shortfall)	<u>(1,41)</u>	<u>(2,30)</u>

- 24 Thus, 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. For this reason a "Contribution Reserve" in terms of the Financial Services Board's Circular PF117 is held equal to the present value of the shortfall for the 5 years to 2015 when it is expected that the surcharge will cease. Note that, for purposes of the valuation, it is assumed that once the surcharge ceases the Employer contribution rate will be fixed at 18%. Based on the latter level of Employer contribution there is no need for a Contribution Reserve thereafter.
- 25 We have reconciled the valuation data with the financial statements and performed a number of reasonableness tests to verify the correctness of the data. I am satisfied with the accuracy of the data for purposes of this valuation.
- 26 I am satisfied that the asset composition on the valuation date is appropriate to the nature of the liabilities.
- 27 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 the self-reinsurance arrangement is appropriate for the Fund.
- 28 At the valuation date
- 28.1 The Memorandum Account in respect of pensioners was fully funded;
- 28.2 Based on the valuation assumptions that applied in 2000, the Fund was fully funded.
- 28.3 However, based on the revised assumptions, the Fund's liabilities for the contributory members exceeded the value of the assets and an extension of the surcharge for another 5 years will be necessary to return the funding level of the Fund to 100%.
- 29 The position will be reviewed at the next interim valuation of the Fund as at 31 March 2010.

AR ELS (FASSA FIA)
VALUATOR

In my capacity as valuator to the Fund and as an employee of Arthur Els & Associates

2 December 2009

S HEYNEKE (FASSA FIA)
ACTUARY

In my capacity as actuary and as an employee of Arthur Els & Associates

**NATAL JOINT MUNICIPAL PENSION FUND (RETIREMENT)
REPORT ON THE STATUTORY ACTUARIAL VALUATION OF THE FUND
AS AT 31 MARCH 2009**

INTRODUCTION

1. We have performed a statutory actuarial valuation of the Natal Joint Municipal Pension Fund (Retirement) (the “Fund”) as at 31 March 2009 (“the valuation date”). This report must be submitted to the Financial Services Board (“FSB”) within 12 months of the valuation date. The previous statutory valuation of the Fund was performed as at 31 March 2006 and the report on that valuation was lodged with the Financial Services Board. Interim actuarial valuations were also performed as at 31 March 2007 and 31 March 2008.
2. In this report the purposes of the valuation, the processes involved, the results obtained and the conclusions drawn are explained. The body of the report is a summary of the data, assumptions and results. The appendices, which form part of the report, contain particulars of the data, the reasons for the assumptions and details of the results.
3. The Fund is registered in terms of the Pension Funds Act and approved by the Commissioner for Inland Revenue for Income Tax purposes.

PURPOSE OF THE VALUATION

4. The purpose of the valuation is to investigate the financial soundness of the Fund in terms of the funding objectives laid down by the Actuarial Society of South Africa and as required by the Registrar of Pension Funds.
5. This requires that the following be determined:
 - 5.1 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;
 - 5.2 whether the future contribution rates are sufficient to meet the future accrual of benefits stipulated in the Regulations of the Fund;
 - 5.3 whether any changes are required to the assumptions as a result of the experience of the Fund, or prevailing conditions;
 - 5.4 whether the contingency reserve accounts are appropriately funded; and
 - 5.5 whether the nature of the assets of the Fund is suitable to match the nature of the liabilities of the Fund.

6. At each statutory triennial valuation the reasons for the change in the surplus/shortfall is investigated. Details of this investigation can be found in Appendix 7.

CHANGES SINCE LAST STATUTORY VALUATION

7. The last statutory valuation was performed as at 31 March 2006. The period between this date and the valuation date (31 March 2009) is referred to as the “valuation period”.
8. Since the last statutory valuation, pensions in payment were increased as follows:

1 July 2006	3,98%
1 July 2007	3,45%
1 July 2008	5,74%
1 July 2009	8,64%

9. The Pension Funds 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 investigation for this Fund was done as at 31 March 2006. Over the three years since then, pensions were increased by 18,84% while CPI increased by 27,32%. An additional increase of 7,14% is therefore due to pensioners as the Memorandum Account is in surplus and such increase is affordable. 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 7,14% is payable, backdated to 1 July 2009. We recommend that pensions be increased as required by the Act, backdated to 1 July 2009. The cost of the increase is included in the liabilities for this valuation.
10. Over the inter-valuation period, the Fund earned 7,62% per annum on its assets taken at market value but 17,8% per annum on actuarial value.
11. Since 1 July 2000 additional contributions are being paid to the Fund towards meeting the shortfall in respect of the members’ liabilities, as follows:

With effect from	Surcharge*
1.07.2000	2%
1.07.2002	6%
1.07.2004	12%
1.07.2006	14%
1.07.2007	17%

* 1,65% is paid by members

The additional contributions since 2002 are payable only in respect of members who were members at 30 June 2002.

VALUATION PARTICULARS

12. Particulars were supplied of –
 - 12.1 Audited financial statements (Appendix 1);
 - 12.2 The assets held by the Fund at the valuation date (Appendix 5);
 - 12.3 The members and pensioners of the Fund at the valuation date (Appendix 2); and
 - 12.4 The conditions governing the payment of benefits in terms of the Regulations of the Fund (Appendix 3).
13. We have reconciled the valuation data with the financial statements and performed a number of reasonableness tests to verify the correctness of the data. We made some adjustments to the financial statements over the valuation period in respect of the breakdown of benefits and the understatement of transfers payable and receivable. (See Appendix 1).
14. We are, however, satisfied with the accuracy of the data for purposes of this valuation.

VALUATION METHOD

Service to the valuation date

15. The Fund's liabilities for members' service to the valuation date and for pensioners was calculated on two alternative valuation methods:
 - 15.1 The first method is the "Discounted Cash Flow" (DCF) method of valuation that 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 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. As regards the Fund's assets, a value is determined by discounting expected future investment cash flow at the same rate of interest, allowing for expected future growth in dividends and other investment income. In this manner an "actuarial value" is placed on the assets of the Fund.
 - 15.2 A second valuation was then performed on an alternative basis, namely the "Discontinuance Method Approach" (DMA). This valuation takes into account investment conditions that are prevailing at the valuation date. The benefits payable by the Fund in the future, including pensions in payment, are estimated and these are discounted using the yield that could be earned on Government Stock at the valuation date. This gives the Fund's liabilities for service to the valuation date. Assets are taken at full market value.

16. Each of the above methods has advantages and disadvantages.
- 16.1 The value placed on the assets under the DCF method can be quite different from the market value of the assets and thus this method can be seen as giving somewhat artificial results. However, it has the advantage that the results on this basis tend to be stable from valuation to valuation despite volatile investment conditions, because of the long-term nature of the assumptions made.
- 16.2 The alternative valuation method gives results that can be volatile from valuation to valuation. However it has the advantage of appearing “realistic” because the assets are taken at market value and the assumptions are based on investment conditions prevailing at the valuation date.
17. The purpose of providing the results of two valuations is to give the Committee of Management an indication of the sensitivity of the valuation results to the assumptions. In this report we have used the results of the DCF valuation, because of its relative stability, in order to determine the Fund’s liabilities. The results of the DMA valuation are shown so that the Committee is aware of the position if the Fund were to be discontinued and the liabilities bought out in the market at the prevailing interest rates.
18. We have been provided with information in respect of 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	Nil
between 2 and 3 years	one-sixth
between 1 and 2 years	one-half
less than 1 year	five-sixths

19. We have this year been provided with details of 469 cases where a spouse’s pension is possibly payable following the death of a member in the service or of a pensioner. We have allowed for an estimated pension per spouse of R 9 700 per annum where no data was available from the administrator. 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 15,96 million has been included in the Members’ liabilities and R 0,7 million in the pensioner liabilities in respect of pensioner spouses. This matter will be monitored at each valuation and the figure of 50% adjusted appropriately.

Future service

20. The Employers 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 and determines the level rate of contribution that is required over the remaining service lifetime of the members.

21. If the valuation assumptions are realized, this level rate of contribution should remain sufficient despite an increase in the average age of members. This assumption may not be realised if there are significant unforeseen changes in the membership, for example, if a number of members transfer into the Fund or out of the Fund from the other Natal Joint funds. The position will be monitored at each valuation.
22. This basis is referred to as the Attained Age Method of Valuation and was used for the purpose of this interim valuation.

Risk Reserve

23. 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. The Financial Services Board’s Circular PF117 sets out a standard for determining such a reserve; based on the formulae set out in Circular PF117 a Risk Reserve of R 51,8 million is appropriate for the Fund and we recommend that such a Reserve be retained.

VALUATION ASSUMPTIONS

Liabilities

24. The expected future payments of benefits were projected using reasonable demographic assumptions regarding withdrawals, mortality, disability and retirement, and financial assumptions regarding the future salary increases until retirement and pension increases after retirement. The projected benefits were then discounted at the valuation rate of interest to determine the present value of the liabilities on the valuation date.
25. At each statutory triennial valuation the Fund’s actual experience is compared to the valuation assumptions and where necessary, the assumptions are revised. Our investigation disclosed that the mortality assumption for pensioners was not in line with actual experience and hence the assumption was changed for this valuation. For active members our investigation also disclosed that the mortality and ill-health assumptions for females and the withdrawal assumption for males were not in line with experience and those assumptions were changed for this valuation. Details are given in Appendix 4.
26. For the DMA method of valuation the assumptions were determined in the light of investment conditions prevailing at the valuation date. Details of the assumptions are given in Appendix 4.

ASSETS

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

27.1 For the DCF method of valuation, the actuarial value of the assets was determined 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. On this basis the assets are valued at R1 667,6 million (Details are given in Appendix 5). The value placed on the assets for purposes of this valuation is higher than the market value and the Committee should be aware of the risks associated with this approach as explained in 16.

27.2 For the DMA method of valuation, assets were taken at market value.

27.3 The value placed on the assets for purposes of the valuation are:

	DCF Method		DMA Method
	31.03.2006	31.03.2009	31.03.2009
	R'm	R'm	R'm
Assets at market value	1 147,7	1 454,9	1 454,9
Less: Investment Reserve	<u>(139,4)</u>	<u>212,7</u>	<u>-</u>
Actuarial value of assets	<u>1 008,3</u>	<u>1 667,6</u>	<u>1 454,9</u>

It is noted that, for the DCF valuation at 31 March 2009, an actuarial adjustment of R 212,7 million was made to the market value of the assets so that assets have been taken at R 1 667,6 million for this method of valuation.

27.4 The details of the basis used to value the assets, and the results thereof, are set out in Appendix 5.

VALUATION RESULTS

Service to the valuation date

28. Valuation results for this statutory actuarial valuation are shown on two actuarial bases. The first result reflects the progression of the shortfall in the Fund based on the 2000 valuation basis. This enables the Committee to monitor the funding of the shortfall in comparison to the Scheme of Arrangement submitted to the FSB after the 31 March 2000 statutory actuarial valuation.

29. The second result reflects the position of the Fund on an updated valuation basis that corresponds to the Fund's actual experience over the last few years. This result shows the realistic position of the Fund going forward.

30. The valuation results based on the actuarial basis used in the statutory actuarial valuation of the Fund as at 31 March 2006 (consistent with the 2000 valuation basis) are as follows:

	2006 valuation basis	
	DCF Method	
	31.03.2006	31.03.2009
	R'm	R'm
Value of assets	1 008,3	1 667,6
Value of liabilities	(1 077,7)	(1 422,6)
Minimum pension Increase Reserve	(63,4)	(182,8)
Risk Reserve	(37,2)	(46,8)
Contribution Reserve	<u>(34,8)</u>	<u>(0,0)</u>
Surplus (shortfall)	<u>(204,8)</u>	<u>15,4</u>
Funding level	83,1%	100,9%

31. On the DCF method the Fund is now fully funded on the actuarial basis used in the 2000 statutory valuation.
32. As mentioned in paragraph 25, this statutory valuation was performed on revised assumptions. The valuation results below reflect the position of the Fund on these revised assumptions.

	DCF Method		DMA Method
	31.03.2006	31.03.2009	31.03.2009
	R'm	R'm	R'm
<u>Total</u>			
Value of assets (Appendix 5)	1 008,3	1 667,6	1 454,9
Value of liabilities (Appendix 6)	(1 077,7)	(1 660,4)	(2 154,9)
Minimum pension Increase Reserve	(63,4)	(134,1)	(0,0)
Risk Reserve	(37,2)	(51,8)	(51,8)
Contribution Reserve	<u>(34,8)</u>	<u>(35,5)</u>	<u>(35,5)</u>
Surplus (shortfall)	<u>(204,8)</u>	<u>(214,2)</u>	<u>(787,3)</u>
Funding level	83,1%	88,6%	64,9%

* Revised assumptions apply to 31 March 2009 results only. 31 March 2006 results reflected on the basis used in that valuation.

33. On the DCF method the funding level has improved. This is mainly due to greater than expected investment earnings on the actuarial value of the assets over the three-year valuation period as well as the surcharge that is being paid. This was partly offset by the strengthening of the assumptions as well as greater than expected salary increases.
34. The shortfall on the DMA method is higher than that under the DCF method, indicating the position that would apply if the Fund were to be discontinued and the liabilities bought out on the basis of risk free interest rates at the valuation date. However, the Fund is an ongoing

Fund with equity and other-inflation hedging assets which are expected to yield a higher return than fixed interest stock and hence the results the DCF method of valuation are used to determine the Fund's financial position for purposes of this report.

35. On the revised assumptions, the valuation disclosed a surplus of R 134,1 million in respect of pensioners and a shortfall of R 214,2 million in respect of members, as reflected below.

	DCF Method		DMA Method
	31.03.2006	31.03.2009	31.03.2009
	R'm	R'm	R'm
<u>Memorandum Account (Pensioners)*</u>			
Assets	455,2	835,4	728,8
Liabilities	(380,9)	(684,5)	(839,7)
Risk Reserve	<u>(10,9)</u>	<u>(16,8)</u>	<u>(16,8)</u>
Surplus (Shortfall)**	<u>63,4</u>	<u>134,1</u>	<u>(127,7)</u>
Funding level	116,2%	119,1%	85,1%
<u>Members</u>			
Balance of assets	553,1	832,2	726,1
Balance of liabilities***	(696,8)	(975,9)	(1 315,2)
Risk Reserve	(26,3)	(35,0)	(35,0)
Contribution Reserve	<u>(34,8)</u>	<u>(35,5)</u>	<u>(35,5)</u>
Surplus (Shortfall)	<u>(204,8)</u>	<u>(214,2)</u>	<u>(659,6)</u>
Funding level	73,0%	79,5%	52,4%

* The operation of the Memorandum Account is explained in detail in a separate report. The liabilities for the pensioners include an allowance for the pension increase on 1 July 2009.

** This amount is retained to provide for minimum pension increases.

*** Including allowance for death-in-service pending spouse's pensions.

36. Over the three years to 31 March 2009 the Fund earned greater than expected investment returns. The overall effect was that a top-up increase to make pension increases equal to full CPI (prescribed increases) over the valuation period could be afforded while maintaining funding level of 119,1% in the Memorandum Account. The surplus is retained as a contingency reserve to provide for minimum pension increases as prescribed by legislation and incorporated in the Fund's Regulations. The Memorandum Account has a deficit on the DMA method of valuation, indicating that this Account will not be sufficient to provide for future pension increases if the underlying assets are invested in risk-free investments.

37. The funding level in respect of the contributory members has improved from 73,0% to 79,5%. The reasons for this are:

37.1 The Fund earned greater than expected investment returns on the actuarial value of assets over the three year valuation period.

37.2 The Local Authorities paid the surcharge into the Fund over the valuation period.

This was partly offset by the following two points

37.3 The valuation basis was strengthened in accordance with actual experience of the Fund.

37.4 Salary increases were higher than expected. From the data it is noted that the average salary increases over the valuation period were 10,0% per annum, which is higher than inflation over that period.

38. There is a shortfall on the DMA method of valuation. The difference between the results of the DCF and DMA valuation quantifies the reliance being placed by the Committee of Management on investment returns on the Fund's investment portfolio being higher than are currently obtainable on risk-free investments.
39. We expect that an extension of the current surcharge for another 5 years after 2010 will be required to bring the funding level of the Fund to 100% on the revised valuation basis that allows for assumptions that correspond to the actual experience of the Fund.
40. It must be borne in mind, however, that the surcharge may need to be increased if salary increases continue to exceed inflation.

Contingency Reserves

41. The DCF method of valuation is based on best-estimate assumptions, including the assumption that the Fund's equity and property investments will yield a higher return than fixed interest stock. If this assumption is not realised then future investment earnings will be lower than expected, leading to a shortfall arising in future years. To reduce this risk the Fund could hold a "Solvency Reserve", determined according to Circular PF117 which was issued by the Financial Services Board in June 2004. The Solvency Reserve is the size of reserve needed to compensate the Fund for taking investment risk, because the DMA valuation adopts a "risk-free" approach to investment. In the case of the Fund the Solvency Reserve would amount to R 707,2 million, as reflected below:

	R' million
Liabilities per DMA method	2 154,9
Less: Liabilities per DCF method	(1 660,4)
Investment Reserve	<u>212,7</u>
	<u>707,2</u>

42. In view of the shortfall in the Fund, it was deemed not appropriate to retain a Solvency Reserve at this stage. The Committee of Management should be aware of the risks that this entails, as discussed in paragraph 16.
43. Circular PF117 also gives recognition to the mortality risks to which the Fund is exposed. This arises from pensioners living longer than allowed for in the valuation assumptions, and excessive deaths and disability claims where benefits are not reinsured with an insurer but are paid directly from a Fund. A fund may hold a "Risk Reserve" equivalent to the capital that would be required from an insurance company undertaking the business. In the case of the

Fund, the Risk Reserve amounts to R 51,8 million calculated in accordance with paragraph 4.4 of Circular PF117. It is prudent that the Fund retains a Risk Reserve in order to give protection against fluctuations in mortality and for that reason such a reserve was introduced in the last statutory valuation as at 31 March 2006. We recommend that this reserve be maintained and we have allowed for this Reserve, comprising R 16,8 million in respect of pensioners and R 35,0 million in respect of active members.

Future service

44. Contributions payable to the Fund at the valuation date, including the surcharge, expressed as a percentage of the pensionable salaries, are:

	%	%
by members - basic	7,00	
- additional*	<u>1,65</u>	8,65
by the local authorities - basic	13,65	
- additional*	<u>15,35</u>	<u>29,00</u>
Total		<u>37,65</u>

45. The total required contribution rate for future service is 22,95% of pensionable salaries before taking account of the past service shortfall. This has been calculated on the DCF basis in order to arrive at a relatively stable long-term rate of contribution, using the Attained Age method of valuation.
46. Based on the DCF method of valuation, the contribution rate payable at the valuation date was less than the contribution rate required for future service by 2,3% of pensionable salaries, as reflected below:

	31 March 2006	31 March 2009
	%	%
Method of valuation	Attained Age	Attained Age
Contribution rate currently payable excluding surcharge	20,65	20,65
Contribution rate required for future service	<u>22,06</u>	<u>22,95</u>
Excess/(shortfall)	<u>(1,41)</u>	<u>(2,30)</u>

47. Thus, 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. For this reason a "Contribution Reserve" was introduced in the last statutory valuation equal to the present value of the shortfall in terms of the Financial Services Board's Circular PF117 for the 5 years to 2015 when it is expected that the surcharge will cease. Note that, for purposes of this valuation, it is assumed that once the surcharge ceases Employer contributions will be fixed at 18% of pensionable salaries. Based on the latter level of Employer contribution there is no need for a Contribution Reserve thereafter.

Surcharge

48. The statutory actuarial valuation as at 31 March 2000 disclosed that the Fund was in shortfall (the "2000 valuation shortfall"). As required by the Pension Funds Act, a "Scheme of Arrangement" was implemented so that the shortfall would be funded over the nine year

period 1 July 2001 to 30 June 2010. The initial surcharge has been reviewed at each annual actuarial valuation and it has been found necessary to increase the level of the surcharge, to the level of 17% of pensionable salaries that applied from 1 July 2007.

49. Based on the actuarial basis applied in the 2000 statutory valuation, the Fund is fully funded as at the valuation date. On the revised valuation assumptions, a continuation of the current surcharge of 17% of pensionable salaries is required for 5 years after June 2010 to return the funding level to 100%.

OUTLOOK

Investments

50. Over the inter-valuation period, the Fund earned 7,62% per annum on its assets taken at market value and 17,8% per annum on actuarial value. The latter is greater than the assumptions used in the valuation for investment earnings. This contributed towards the improved funding level of the Fund over the valuation period.
51. It is expected that the investment return of the Fund's assets will, over a reasonably long period, be greater than that required to meet the increase in liabilities as a result of reasonable salary increases. If it does occur that investment earnings continue to be lower than required to support the increase in liabilities as a result of salary increases, the local authorities might need to be called upon to further increase their contributions to the Fund.
52. Increases to pensions at the rate of about 75% of inflation a year can be met if the valuation assumptions are realised. Any additional increases must be met from investment returns in excess of those assumed or from surplus or other profits made on the operations of the Memorandum Account.

Salary increases

53. A primary reason for the Fund not being in a sound financial condition, and for the increase in the surcharge over the years, has been the excessive increases in pensionable salaries relative to inflation. For the valuation period the average salary increases were 10,0%.
54. The Regulations of the Fund have been amended so that the Committee of Management is able to levy a separate surcharge on local authorities which grant excessive salary increases, thereby causing a financial strain on the Fund to the detriment of other stakeholders. This is effective from 1 July 2004. An investigation into the surcharges due in this regard was done as at 31 March 2006. Another investigation will be performed as at 31 March 2009.
55. The above step will assist in curbing the growth in the Fund's liabilities as a result of excessive salary increases.
56. If increases in pensionable salaries continue to be well in excess of inflation, a further surcharge might be required to fund the additional cost incurred.

Withdrawals

57. Prior to promulgation of the Pension Funds Second Amendment Act, 2001, there were profits in the event that the number of actual withdrawals exceeded the number allowed for in the valuation assumptions. However, the introduction of the prescribed minimum benefits means that such profits will be immaterial in future.

New members and transfers

58. The Fund has effectively been closed to new members, and it is therefore assumed, for the valuation, that no new members will join the Fund. However, 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.

CERTIFICATE

59. We have reconciled the valuation data with the financial statements and performed a number of reasonableness tests to verify the correctness of the data. I am satisfied with the accuracy of the data for purposes of this valuation.
60. I am satisfied that the asset composition on the valuation date is appropriate to the nature of the liabilities.
61. 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 the self-reinsurance arrangement is appropriate for the Fund.
62. At the valuation date:
- 62.1 The Memorandum Account in respect of pensioners was fully funded;
- 62.2 Based on the valuation assumptions that applied in 2000, the Fund was fully funded.
- 62.3 However, based on the revised assumptions, the Fund's liabilities for the Members exceeded the value of the assets and an extension of the surcharge for another 5 years will be necessary to return the funding level of the Fund to 100%.
63. The position will be reviewed at the next interim valuation of the Fund as at 31 March 2010.

**AR ELS (FASSA FIA)
VALUATOR**

In my capacity as valuator to the Fund and as an employee of Arthur Els & Associates

2 December 2009

**S HEYNEKE (FASSA FIA)
ACTUARY**

In my capacity as actuary and as an employee of Arthur Els & Associates

ACCOUNTS

- 1.1 We have been advised that the breakdown of benefit payments shown in the audited statements over the last two years is incorrect. We have restated the breakdown of benefit payments based on the data supplied. In our valuation, investigations showed that the provision for transfers receivable and payable shown on the audited financial statements is incorrect. We have therefore adjusted the audited financial statements to allow for the correct values inclusive of interest to valuation date. Taking into account the revised figures, the income and expenditure of the Fund during the valuation period were as follows:

	R'000	R'000	R'000
Amount of Fund as at 31 March 2006 (market value)			1 147 657
Income			533 944
Contributions:		322 656	
- Members	73 283		
- Local authorities	249 373		
Transfers in		837	
Unclaimed benefits		811	
Investment returns		209 640	
Expenditure			(306 279)
Lump sum benefits:		(131 161)	
- Disability	Nil		
- Withdrawal	(1 951)		
- Retirement	(29 179)		
- Retrenchment	(184)		
- Death	(45 315)		
- Transfer to other funds	(54 531)		
Pensions		(130 059)	
Other		(205)	
Investment managers' fees		(23 383)	
Administration expenses		(19 983)	
Tax		(1 489)	
Net adjustment to fair value of assets			79 539
Amount of Fund as at 31 March 2009 (market value)			<u>1 454 861</u>

MEMBERSHIP STATISTICS

A. MEMBERSHIP BUILD-UP

1. Active Members

Members at last statutory valuation date	5 737
Adjustments	(2)
New members	57
Exits	
Transfer to Superannuation	(185)
Transfer to KZN Pension Fund	(31)
Retirement	(300)
Ill-health	(144)
Death	(547)
Resignation	(84)
Dismissal	(55)
Retrenchment	(12)
Transfer to Provident	(116)
Members at current valuation date	<u>4 318</u>

2. Pensioners

	Former members	Spouses	Deferred	Total
Pensioners at previous valuation date	1 749	3 314	87	5 150
Adjustments and cessations	(15)	(134)	(17)	(166)
New pensioners	439	681	11	1 131
Deaths	(299)	(127)	(7)	(433)
Pensioners at current valuation date	<u>1 874</u>	<u>3 734</u>	<u>74</u>	<u>5 682</u>

3. Deferred Pensioners

The above summary includes 74 deferred pensioners (61 males and 13 females). By “deferred” is meant a pensioner whose pension is payable by the employing local authority until the pensioner attains the pension age.

B. VALUATION DATA : ACTIVE MEMBERS**1. Analysis**

Age last birthday	Number	Pensionable salaries R	Liability	Contributions without interest R	Average pensionable service years
<=22	1	41 786	20 012	8 430	3
23 - 27	22	1 655 029	824 145	309 216	4
28 - 32	123	9 824 652	9 027 130	3 315 626	7
33 - 37	396	30 518 783	48 366 459	14 500 861	11
38 - 42	614	44 028 646	96 853 984	24 562 672	14
43 - 47	876	61 880 556	172 305 103	36 841 518	17
48 - 52	819	57 525 093	188 913 268	35 301 539	19
53 - 57	726	50 508 394	196 216 158	31 527 136	21
58 - 62	585	39 364 373	184 591 891	25 306 542	22
63+	<u>156</u>	<u>10 584 907</u>	<u>59 283 739</u>	<u>6 930 966</u>	<u>23</u>
Total	<u>4 318</u>	<u>305 932 219</u>	<u>956 401 889</u>	<u>178 604 506</u>	<u>18</u>

2. Statistics

	Previous Valuation Date	Current Valuation Date
(i) Females		
Number of members	793	614
Average age (years)	44,6	47,0
Annual pensionable salaries		
total (R'000)	38 477	39 793
average (R)	48 520	64 809
(ii) Males		
Number of members	4 944	3 704
Average age (years)	46,5	48,4
Annual pensionable salaries		
total (R'000)	263 840	266 139
average (R)	53 366	71 852

C. VALUATION DATA : PENSIONERS

1. Summary

	Current Valuation Date
(iii) Former members	
Number of pensioners	1 874
Average age (years)	71
Annual pension	
total (R'000)	24 961
average (R)	13 320
(iv) Spouses	
Number of pensioners	3 734
Average age (years)	56
Annual pension	
total (R'000)	30 044
average (R)	8 046
(v) Deferred pensioners	
Number of pensioners	74
Average age (years)	58
Annual pension	
total (R'000)	765
average (R)	10 336

2. Further analysis

Age nearest birthday	Former Members		Spouses	
	Number	Annual Pension R	Number	Annual Pension R
<29	0	0	16	233 512
29 – 32	0	0	53	841 073
33 – 37	2	29 660	152	2 190 611
38 – 42	8	120 700	317	4 092 554
43 – 47	29	565 450	451	4 890 772
48 – 52	29	456 146	511	4 412 782
53 – 57	96	2 077 299	539	4 492 946
58 – 62	173	3 835 871	598	3 817 937
63 – 67	403	8 423 258	388	2 279 866
68 – 72	376	5 906 528	329	1 516 615
73 – 77	255	2 068 229	194	658 702
78 – 82	286	1 100 736	125	433 677
83 – 87	157	268 779	39	115 894
88 – 92	46	61 123	20	59 393
93 – 97	11	42 542	1	6 697
>97	<u>3</u>	<u>5 150</u>	<u>1</u>	<u>600</u>
Totals	<u>1 874</u>	<u>24 961 471</u>	<u>3 734</u>	<u>30 043 631</u>

D. SUMMARY OF DATA CHECKS

A large number of tests on the reasonability and consistency of the data were carried out, including the following:

- Reconciliation of the number of members at the valuation date and the previous valuation date, with the movements in membership reported over 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 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.
- We have reconciled the valuation data with the financial statements and performed a number of reasonableness tests to verify the correctness of the data. We made some adjustments to the financial statements of 31 March 2009 (see Appendix 1). We are satisfied with the accuracy of the data for purposes of this valuation.

We are satisfied with the general accuracy of the data and with its suitability for purposes of the valuation.

BENEFITS AND CONDITIONS

3.1 The benefits of the Fund at the valuation date are briefly described below:

Member's contributions	7% of pensionable salaries, plus a surcharge of 1,65% of pensionable salaries in respect of members who were members at 30 June 2002
Pension age	65 years
Final average salaries	Average annual pensionable salaries during the last year of service
Pension on retirement at pension age	2,1% of final average salaries per year of continuous service
Lump sum on retirement at pension age	5,5% of final average salaries per year of continuous service
Pension on retirement because of ill health (minimum ten years' continuous service)	Pension as for retirement at the pension age
Lump sum on retirement because of ill health (minimum ten years' continuous service)	Lump sum as for retirement at the pension age
Lump sum on retirement because of ill health (less than ten years' continuous service)	The greater of the resignation benefit or twice the member's contributions
Spouse's pension on death in service	1,05% of final average salaries per year of continuous service at date of death and 75% of potential service to the pension age
Spouse's pension on death of pensioner	1,05% (0,77% for pensioners who retired before 1 July 1999) of final average salaries per year of continuous service
Lump sum on death in service	Annual pensionable salaries

Withdrawal	Member's contributions plus $\frac{5}{12}\%$ 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.
Prescribed minimum benefits	All benefits are subject to the minimum prescribed by the Pension Funds Act.

VALUATION ASSUMPTIONS

A. VALUATION BASIS

1. General

To assess the financial position of the Fund, an attempt is made as far as possible to reach realistic long-term assumptions. A number of factors are considered, which are inter-related, often to such an extent that individual elements cannot be considered in isolation.

Our valuation basis takes into account the experience of the Pension Fund and that of similar funds.

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.

It was decided to value the Fund on two alternative methods of valuation:

- 1.1 The first method is the “Discounted Cash Flow” (DCF) method of valuation that 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 long-term rate of interest, to give the present value of their liabilities for service to the valuation date. A similar approach is taken to pensions in payment. As regards the Fund’s assets, a value is determined by discounting expected future investment cash flow at the same rate of interest, allowing for expected future growth in dividends and other investment income. In this manner an “actuarial value” is placed on the assets of the Fund.
- 1.2 The valuation was then performed on an alternative basis, namely the “Discontinuance Method Approach” (DMA). This valuation takes into 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. This gives the liability for service to the valuation date. Assets are taken at full market value.

Our assumptions are set out and motivated below. Assumptions used in the previous statutory valuation are shown in brackets.

2. Investment return

2.1 DCF Method

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. Taking into account the structure of the Fund's assets we have assumed that the Fund will earn 10% p.a. over the long-term (9% p.a. previously).

Allowing for the Fund's relatively large holdings of equities, it was assumed that:

- 5% of the assets generate cash returns of, say, 6,5% p.a.;
- 25% of the assets are invested in Fixed Interest stock yielding, say, 8,5% p.a.;
- 5% of the assets are invested in property earning 9,5% p.a.;
- 65% of the assets are invested in equities with an equity risk premium of 3% above the investment return on Fixed Interest stock so that earnings are 11,5% p.a.; and
- Expenses reduce the earnings by, say, 0,5%;

The calculated Expected Return on Assets is approximately 9,9% for the active members. We have accordingly used a long term investment return assumption of 10%.

This interest rate of 10% p.a. is only really significant in relation to the assumed long-term rate of salary inflation of 6,5% (5,5% previously), as stated below.

We have therefore assumed that future investment returns will exceed future salary inflation by 3,5% p.a.. This is consistent with the previous statutory and interim actuarial valuations.

2.2 DMA Method

At the valuation date the yield on government stocks varied from 6,89% at the short-terms and 8,67% at longer terms. The liabilities of the Fund are predominantly long term and therefore it was decided to apply a rate of interest of 8,58%. 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 8,08% (8,58% less 0,5%) and this was the rate used to place a value on the liabilities of the Fund.

3. Inflation

3.1 DCF Method

It was assumed that inflation over the long-term will be 6% a year (5% a year previously), which is in line with the assumed underlying rate of inflation in the market. This implies that the Fund will earn 4% more than inflation (10% less 6%). This is consistent with the previous statutory and interim actuarial valuations.

3.2 DMA Method

At the valuation date the yield on long-term government stock was 8,67% and that on inflation-linked bonds was 2,76%. The difference of 5,91% (8,67% less 2,76%) is the inflation implied by the market at the valuation date. We have therefore assumed an underlying rate of inflation of 5,91% a year for the DMA method of valuation.

4. Salary increases

4.1 DCF Method

General salary increases as a result of inflation have been provided for at 6,5% pa (5,5% previously) (which must be read in conjunction with the assumed rate of investment return).

In addition, we provided for merit increases based on the experience of the Fund. Samples of the increases allowed for are:

Age years	Merit increases per year %
20	7,7
25	2,9
30	1,8
35	0,7
40	0,1
45	-
50	-
55	-
60	-

4.2 DMA Method

Allowance has been made for salaries to be increased in future at 0,5% p.a. above the assumed rate of inflation of 5,91%, i.e. at 6,41% p.a.

In addition, we have allowed for merit and promotion increases according to the table set out in paragraph 4.1 above.

5. Pension increases

It has been, and continues to be, the policy of the Committee of Management to increase pensions at the rate of inflation provided this is affordable, based on investment returns in excess of 5,5% a year. The increases are subject to a minimum of 75% and a maximum of 100% of Core inflation.

The post retirement interest rate was set at 5,5%. This rate is expected to allow for pension increases of approximately 75% of inflation.

6. Mortality

On the assumptions used in the last statutory valuation we expected 537 deaths from active members and 475 deaths from pensioners over the valuation period. The actual number of deaths from active members was 547 over the three years and that from pensioners 419 (excluding stopped and pending pensioners).

The mortality assumptions used for the last statutory valuation were retained for all active male members of the Fund. The assumptions for female active members were strengthened slightly to allow for the actual experience of the Fund. For pensioners, a lighter mortality assumption was used in this valuation compared to the previous statutory valuation, to reflect the actual experience in the Fund and to allow for future improvements in mortality. Examples of the mortality rates used are shown below. Pensioner mortality is shown before allowance for future improvements in mortality.

Age	<u>Active members</u>		Age	<u>Pensioners</u>	
	Males %	Females %		Males %	Females %
20	1,2	0,2	60	2,3	1,1
25	1,4	0,5	65	3,5	1,8
30	1,8	0,7	70	5,4	3,1
35	2,4	0,9	75	8,3	5,3
40	3,0	1,2	80	12,3	8,7
45	3,6	1,6	85	18,0	14,1
50	4,2	2,4	90	25,6	22,1
55	5,0	3,5			
60	6,2	5,2			
65	7,6	7,2			

7. Withdrawals

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.

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.

Based on the assumptions in the last statutory valuation, we expected 154 male withdrawals and 30 female withdrawals in the valuation period. The actual number of male withdrawals was 113 and that of females 36 over the three years. We therefore adjusted the withdrawal assumption for males to reflect actual experience of the Fund.

The withdrawal rates used are set out in the table below:

Age	Males %	Females %
20		
25	6,7	10,0
30	4,0	6,0
35	2,7	4,0
40	2,0	3,0
45	1,3	2,0
50	0,7	1,0
55	0,3	0,5
60	-	-
	-	-

8. Retirement due to poor health

We have allowed for members to retire on account of ill-health prior to attaining the pensionable age. On the assumptions that were used in the last statutory valuation we expected 182 ill-health retirements over the valuation period. The actual number of ill-health retirements was 144 over the last three years. We have retained the assumptions used for the last statutory valuation for male members, but strengthened the assumption for female members slightly to reflect actual experience in the Fund.

Examples of percentages of ill-health retirements expected at the respective ages are as reflected on the next page.

Age	Males %	Females %
20	-	-
25	-	-
30	0,1	0,1
35	0,2	0,2
40	0,4	0,3
45	0,8	0,5
50	1,5	0,8
55	2,2	1,6
60	3,3	2,6
65	4,5	4,3

9. Family statistics

We assumed that on average a husband will be 5 years older than his wife and that 100% of male members and 50% of female members are married.

10. Expenses

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.

In the case of current pensioners an allowance was made for expenses incurred in the payment of pensions, in both the DCF valuation and the DMA valuation. We have allowed for expenses to be incurred in the payment of pensions, at R 350 per pensioner per annum, increasing in future at the same rate as the pensions. This is the level of expense that would apply if pensions were paid by an outside administrator.

11. Insured benefits

The death and disability benefits are not insured. The costs will vary in the future as the age and gender distribution of the members changes and AIDS and other factors affect the underlying rates.

12. Prescribed minimum benefits

For each member the actuarial reserve was compared to the value of the minimum benefit that would be payable at the valuation 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.

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

- 12.1 The deferred pension is based on service to the valuation date.
- 12.2 The rate of discount is 4,13%.
- 12.3 The pension will be payable from the member's normal retirement age.
- 12.4 No decrements are applied in placing a value on the deferred pension, until retirement at the normal retirement age.
- 12.5 Post-retirement mortality and allowance for pension increases after retirement are set out in paragraphs 5 and 6 above.

VALUATION OF ASSETS

A. ASSET COMPOSITION

The total market value of the assets was R 1 454 861 000, comprised as follows:

	R'000	%
Equities	904 708	62,2
Interest bearing stock	154 195	10,6
Cash and deposit	227 762	15,7
International assets	186 883	12,8
Current assets	15 803	1,1
Current liabilities	<u>(34 490)</u>	<u>(2,4)</u>
Total	<u>1 454 861</u>	<u>100,0</u>

B. ASSET VALUATION BASIS – DCF METHOD OF VALUATION

1. For the DCF method of valuation, it is necessary to discount expected future income and expenditure on a consistent basis. In the case of the valuation of the assets, this applies to expected receipts from investments, namely interest, rent, dividends and maturity payments. The book value and the current market value are only suitable for determining the financial position of a pension fund in exceptional circumstances.
2. We valued the assets by calculating the discounted value of the expected cash flow based on the valuation rate of interest of 10% p.a.
3. The dividend yield on the ALSI was 4,82% at the valuation date. Our valuation rate of interest is 10,0% p.a. and due to the depressed markets we assumed future dividend growth will be limited to inflation in the long term. We therefore assumed that the dividend yield on the Fund's equities was approximately 4% p.a. Equities were thus valued at 120% of market value.

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

Property was valued at 90% of market value.

Cash and net current assets are taken at face value.

4. It was assumed that the mix of investments in other assets was similar to the mix in the balance of the Fund.
5. The actuarial value of the assets amounted to R1 667,6 million at the valuation date, which was equal to 115% of market value.

VALUATION OF LIABILITIES

A. TOTAL LIABILITIES

Service to the valuation date

- 6.1 The value of the liabilities of the Fund for the service of members and former members to the valuation date was R 1 660 400, as follows:

	DCF Method		DMA Method
	31 March 2006	31 March 2009	31 March 2009
	R'000	R'000	R'000
Members	696 841	975 873	1 315 169
Pensioners	133 082	223 666	264 403
Deferred pensioners	3 649	4 972	6 410
Spouses	198 506	322 174	405 072
Suspended/Pending Reserve	23 195	35 407	43 191
Increase in pensions*	9 462	82 730	101 574
Administration costs	<u>13 005</u>	<u>15 578</u>	<u>19 115</u>
Past-service liabilities	<u><u>1 077 740</u></u>	<u><u>1 660 400</u></u>	<u><u>2 154 934</u></u>

- * From 1 July of year of valuation, pro-rata for pensions in payment for less than a year at the valuation date. Also includes a pension increase of 7,14% in respect of the tri-annual investigation into prescribed minimum pension increases.

Future service

- 6.2 The "Attained Age" method of valuation was used which allows for the fact that the Fund is closed to new members, as explained in the main body of the report.
- 6.3 The contributions (expressed as a percentage of pensionable salaries) required for future service were as follows:

	%
Benefits for future service	21,70
Administration expenses	<u>1,25</u>
	<u><u>22,95</u></u>

B. DETAILS OF LIABILITIES**1. Past service – DCF Method**

The components of the liabilities in respect of past service are:

	DCF Method	DMA Method
	Total	Total
	R'000	R'000
Active members		
Benefits on :		
retirement	352 430	479 419
death	365 774	499 630
ill-health	219 112	290 684
withdrawal	19 085	20 419
Minimum benefits	3 511	4 835
Pending pensioners	<u>15 961</u>	<u>20 182</u>
Subtotal	<u>975 873</u>	<u>1 315 169</u>
Pensioners		
Former members	223 666	264 403
Spouses	322 174	405 072
Pension payments ceased/pending	35 407	43 191
Deferred pensioners	4 972	6 410
Pension increase*	82 730	101 574
Administration fee	<u>15 578</u>	<u>19 115</u>
Subtotal	<u>684 527</u>	<u>839 765</u>
Total liabilities	<u>1 660 400</u>	<u>2 154 934</u>

* From 1 July of year of valuation, pro-rata for pensions in payment for less than a year. Also includes a pension increase of 7,14% in respect of the tri-annual investigation into prescribed minimum pension increases

2. 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
Retirement	7,82
Disability	3,98
Death in service	9,36
Withdrawal	0,54
Administration costs	<u>1,25</u>
Total	22,95
Current contributions by members	(7,00)
Required employer contribution rate	<u>15,95</u>

APPENDIX 6A

LIABILITIES FOR MEMBERS FOR SERVICE TO VALUATION DATE

Females

Age last birthday	Number	Pensionable salaries R	Liability	Contributions without interest R
<=22	0	0	0	0
23 - 27	10	775 802	204 357	139 191
28 - 32	33	2 984 290	1 396 686	839 156
33 - 37	69	5 847 582	4 570 632	2 304 780
38 - 42	82	5 111 965	5 766 258	2 613 076
43 - 47	123	7 434 561	11 704 201	4 148 948
48 - 52	102	6 134 182	13 345 061	3 633 888
53 - 57	100	5 966 999	16 673 476	3 608 919
58 - 62	72	4 206 696	15 180 626	2 607 956
63+	<u>23</u>	<u>1 330 974</u>	<u>5 635 125</u>	<u>819 069</u>
Total	<u>614</u>	<u>39 793 051</u>	<u>74 476 422</u>	<u>20 714 983</u>

Males

Age last birthday	Number	Pensionable salaries R	Liability	Contributions without interest R
<=22	1	41 786	20 012	8 430
23 - 27	12	879 227	619 788	170 025
28 - 32	90	6 840 362	7 630 444	2 476 470
33 - 37	327	24 671 201	43 795 827	12 196 081
38 - 42	532	38 916 681	91 087 726	21 949 596
43 - 47	753	54 445 995	160 600 902	32 692 570
48 - 52	717	51 390 911	175 568 207	31 667 651
53 - 57	626	44 541 395	179 542 682	27 918 217
58 - 62	513	35 157 677	169 411 265	22 698 586
63+	<u>133</u>	<u>9 253 933</u>	<u>53 648 614</u>	<u>6 111 897</u>
Total	<u>3 704</u>	<u>266 139 168</u>	<u>881 925 467</u>	<u>157 889 523</u>
Grand Total	<u>4 318</u>	<u>305 932 219</u>	<u>956 401 889</u>	<u>178 604 506</u>

* Excludes liabilities for Prescribed Minimum Benefits

APPENDIX 6B

LIABILITIES FOR PENSIONERS

Age nearest birthday	Number of Pensioners	Annual Pension R	Liabilities R
Females			
< 22	0	0	0
23 - 27	0	0	0
28 - 32	0	0	0
33 - 37	0	0	0
38 - 42	0	0	0
43 - 47	1	15 399	232 737
48 - 52	3	45 312	650 824
53 - 57	9	135 450	1 739 398
58 - 62	14	258 660	3 031 692
63+	<u>170</u>	<u>2 163 166</u>	<u>18 812 082</u>
Total	<u>197</u>	<u>2 617 987</u>	<u>24 466 734</u>
Males			
< 22	0	0	0
23 - 27	0	0	0
28 - 32	0	0	0
33 - 37	2	29 660	479 711
38 - 42	8	120 700	1 868 219
43 - 47	23	496 212	7 150 887
48 - 52	24	410 834	5 521 268
53 - 57	69	1 753 209	21 526 964
58 - 62	134	3 267 387	36 781 266
63+	<u>822</u>	<u>13 975 869</u>	<u>125 870 678</u>
Total	<u>1 082</u>	<u>20 053 871</u>	<u>199 198 992</u>
Grand total	<u>1 279</u>	<u>22 671 858</u>	<u>223 665 726</u>

The above summary excludes cases where pension payments have been ceased pending receipt of evidence of survival.

APPENDIX 6C

LIABILITIES FOR DEFERRED PENSIONERS

Age nearest birthday	Number of Pensioners	Annual Pension R	Liabilities R
Females			
< 22	0	0	0
23 - 27	0	0	0
28 - 32	0	0	0
33 - 37	2	21 665	40 692
38 - 42	1	15 365	32 128
43 - 47	0	0	0
48 - 52	2	14 720	67 255
53 - 57	1	3 683	21 504
58 - 62	4	33 282	238 252
63+	<u>2</u>	<u>16 442</u>	<u>121 786</u>
Total	<u>12</u>	<u>105 157</u>	<u>521 617</u>
Males			
< 22	0	0	0
23 - 27	0	0	0
28 - 32	1	9 314	11 888
33 - 37	0	0	0
38 - 42	0	0	0
43 - 47	1	19 013	46 191
48 - 52	1	10 218	37 587
53 - 57	11	125 108	594 225
58 - 62	27	286 530	1 883 056
63+	<u>11</u>	<u>196 212</u>	<u>1 877 624</u>
Total	<u>52</u>	<u>646 395</u>	<u>4 450 572</u>
Grand total	<u>64</u>	<u>751 552</u>	<u>4 972 189</u>

The above summary excludes cases where the pension has been ceased pending receipt of evidence of survival.

APPENDIX 6D

LIABILITIES FOR SPOUSES

Age nearest birthday	Number of Pensioners	Annual Pension R	Liabilities R
Females			
< 22	0	0	0
23 - 27	11	145 702	2 495 773
28 - 32	41	736 442	12 343 933
33 - 37	118	1 865 376	30 230 831
38 - 42	223	3 229 100	50 408 927
43 - 47	329	4 023 187	59 259 295
48 - 52	340	3 699 746	50 774 921
53 - 57	382	3 679 383	46 191 341
58 - 62	416	3 117 192	34 959 163
63+	<u>663</u>	<u>3 935 483</u>	<u>33 068 537</u>
Total	<u>2 523</u>	<u>24 431 611</u>	<u>319 732 721</u>
Males			
< 22	0	0	0
23 - 27	0	0	0
28 - 32	0	0	0
33 - 37	0	0	0
38 - 42	1	8 510	119 795
43 - 47	3	61 900	849 634
48 - 52	2	21 239	260 441
53 - 57	5	53 343	567 227
58 - 62	4	37 930	370 895
63+	<u>4</u>	<u>40 072</u>	<u>273 776</u>
Total	<u>19</u>	<u>222 994</u>	<u>2 441 768</u>
Grand total	<u>2 542</u>	<u>24 654 605</u>	<u>322 174 489</u>

The above summary excludes pending spouse pensioners and cases where the pension has been ceased pending receipt of evidence of survival.

APPENDIX 7**CHANGE IN FINANCIAL CONDITION**

- 7.1 The shortfall at 31 March 2006 was R 141,4 million which was made up of a surplus of R 63,4 million in the Memorandum Account and a shortfall of R 204,8 in respect of the contributory members. The deficit as at 31 March 2009 on the DCF method was R 80,1 million which is made up by a surplus of R 134,1 million in the Memorandum Account and a deficit of R 214,2 million in respect of the contributory members. The Fund therefore made a net profit of R 61,3 million (R 80,1 million less R 141,4 million).
- 7.2 The profits and losses (favourable and unfavourable deviations from the valuation assumptions) that together resulted in the net profit of R 61,3 million were determined, and the amount of each was calculated by approximate methods. The amounts shown in the paragraphs below give only an indication of the relative importance of the items under consideration.

Investment return

- 7.3 The investment return earned on the actuarial value of the assets during the valuation period was 17,8% a year. This was above the assumed valuation rate of 9% a year. This profit together with interest on the deficit as at 31 March 2006 resulted in a profit of R 238,5 million.
- 7.4 The contribution rate that was paid to the Fund as a surcharge by the local authorities during the valuation period to fund the shortfall amounted to R 140,4 million.

Pensionable salaries

- 7.5 Pensionable salaries increased by 10,0% per annum which is more than had been assumed (paragraph 4.1), resulting in a loss of R 103,2 million.

Pensions

- 7.6 Pensions were increased during the valuation period by an average of 5,9% a year. This was slightly higher than the assumed rate of increase. This loss amounted to R 77,7 million.

Expenses

- 7.7 An allowance of 1,25% of pensionable emoluments is made to cover expenses. Actual expenses were higher than allowed for, resulting in a loss of R 8,4 million.

Change in mortality and other assumptions

7.8 As discussed in Appendix 4, some assumptions had to be changed to reflect the actual experience of the Fund. This resulted in a loss of about R 132 million.

Miscellaneous

7.9 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 3,7 million, the balancing item in the analysis.

Summary

7.10 The change in the financial condition of the Fund during the period was therefore explained as follows:

	R'000
Shortfall at 31 March 2006	(141,4)
Investment return	238,5
Excess contributions	140,4
Pensionable salaries	(103,2)
Pension increases	(77,7)
Expenses	(8,4)
Change in assumptions	(132,0)
Miscellaneous	<u>3,7</u>
Actual surplus at 31 March 2009	<u>(80,1)</u>

LIMITATIONS TO USE OF REPORT

This report has been prepared for the Committee of Management 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 Committee of Management of the Natal Joint Municipal Pension Fund (Retirement) who will in turn obtain written comment from Arthur Els & Associates on whether this report is appropriate for the intended use.

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