REPORT ON THE

ACTUARIAL VALUATION OF THE GOVERNMENT INSTITUTIONS PENSION FUND AS AT 31 MARCH 2009

GIPF

HUMANITY
Employee Benefits

CONTENTS

MAIN REPORT

INTRODUCTION

1. We have carried out a statutory Actuarial Valuation of the Government Institutions Pension Fund ("the Fund") as at 31 March 2009 ("the Valuation Date"). The previous statutory Actuarial Valuation of the Fund was performed as at 31 March 2006 ("the Previous Valuation Date").

2. The three-year period separating the Previous Valuation Date and the Valuation Date is referred to as the "Valuation Period".

3. This report is addressed to the Trustees of the Fund with copies available for the Registrar and Prime Minister of Namibia. The Valuation has been carried out in accordance with section 10.8 of the Current Rules to the Fund as regulated by the Pension Funds Act, Act 24 of 1956 ("the Act").

4. According to the Act, a statutory Actuarial Valuation is required at least every three years. The next statutory Valuation should therefore be carried out no later than 31 March 2012.

5. The Fund is governed by its Rules. The liabilities of the Fund towards its Members were calculated in accordance with these Rules. A summary of the Fund Structure and of specific benefits and conditions applicable to Members is set out in Appendix A.

Purpose of the Valuation

6. The main objectives of this Valuation are to:

   a) Assess the financial position of the Fund as at the Valuation Date.

   b) Review whether the future contributions are adequate to meet the future accrual of benefits stipulated in the Rules of the Fund.

   c) Determine whether the nature of the assets of the Fund is suitable to match the nature of the liabilities of the Fund.

   d) Fulfil the statutory requirements of the Act.

Nature of the Fund

7. The objective of the Fund is to provide Retirement, Death and Ancillary Benefits for the beneficiaries as described in the Rules.

8. The Fund evolved from the Statutory Institutions Pension Fund ("the Old Fund") with effect from 1 October 1989. The object of the Fund is to provide Retirement and Ancillary Benefits for the beneficiaries as described in the Rules.

9. There are currently about 64 sponsoring Employers registered under the Fund. The largest proportion of Employees is from Government ministries. These constitute about 95% of the Total Active Membership.

10. As at Valuation Date, the Fund employed about 143 officers and administrators who administer the Fund's operations under the Trustees' guidance. The Trustees manage and control the Fund's affairs according to its Rules.

11. The Members currently receive a "Defined Benefit" pension on Retirement. Under a Defined Benefit arrangement the individual's pension is calculated according to a formula. The pension is calculated as 2.4% of Final Salary multiplied by Member's Pensionable Service.

12. All pensions and cost of increases are paid by the Fund.

Financially Significant Changes

13. Recent increases Pension and Disability Benefits in payment have been as follows (CPI inflation is shown for comparative purposes):

Date of Increase	Pension Increase	Disability Income Increase	Average Salary Increase	Inflation
1 April 2009	11.0%	12.0%	12.0%	11.2%
1 April 2008	7.5%	5.0%	5.0%	8.4%
1 April 2007	5.0%	0.0%	0.0%	6.3%
1 April 2006	7.0 %	0.0%	0.0%	4.6%

Note: The average salary increase is taken as the overall increase awarded to civil servants (Grade 1c to 6B).

14. There are Proposed Amendments to the Rules which may have financially significant changes to the operations of the Fund.

Previous Recommendations

15. As per the Previous Valuation of the Fund, it was recommended that:

  a) The contributions paid by the Employers be increased slowly as a phased removal of the partial Employer contribution subsidy.

  b) A risk management strategy be implemented and a Risk Reserve Account be set up, to help stakeholders manage risk.

  c) Data issues and concerns be examined, also a quality controller be appointed.

  d) Proposed rule amendments and their financial impact be analysed.

Professional Guidance

16. This report adheres to the Professional Guidance Note PGN201 of the Actuarial Society of South Africa and to Guidance Note GN9 of the Institute of Actuaries in all respects except the following:

- A termination position of the Fund has not been shown.
- Sections specific to the United Kingdom have been ignored.
- No comment has been made as to whether the use of derivatives has been appropriate.

VALUATION DATA

17. GIPF Benefits Administrators supplied the data for this Valuation and the Previous Valuation. We have checked the data for completeness and reasonability. There were some problems with the data and a summary of the data is given in Appendix B. A summary of the data problems and estimations employed is given in Appendix C.

18. The Membership of the Fund at this Valuation and at the Previous Valuation according to latest data supplied is summarised as follows:

Gender	Number of Members at Current Valuation	Number of Members at Previous Valuation
Males	44 092	46 139
Females	38 113	38 442
Total	**82 205**	**84 581**

Note: Active Members' Data include Members who could not be found on GIMIS but are on the Payroll data and vice versa. Details of this and other data issues are covered in Appendix C.

19. There were 207 Members above Normal Retirement Age of 60 years but below the age of 67 years. We suspect these Members could have been allowed to retire in terms of the Public Service Act, 1995 (Act No. 13 of 1995). Therefore the Members have been valued as Active Members for the purposes of this Current Valuation.

20. The change in Membership from 84 581 to 82 205 represents an overall decrease of 2.8% in the Membership of the Fund. The total annual salaries of Active Members is summarised below:

Gender	Total Annual Salary at Current Valuation (N$ 000's)	Total Annual Salary at Previous Valuation (N$ 000's)
Males	2 628 647	2 412 824
Females	2 362 825	2 049 764
Total	**4 991 472**	**4 462 588**

Note: Active Members' salaries include individual increases awarded as at 1 April 2009.

21. A comparison of the increase in total annual salary on the basis of the latest data supplied for this Valuation and Previous Valuation was done. The total annual salary bill has increased by N$0.53 billion, from N$4.46 billion to N$4.99 billion since the last Valuation. This represents an 11.9% increase in the total annual salary bill, which represents a compound rate of growth of 3.8% per annum over the Valuation Period.

22. The average annual salaries of Active Members is summarised below in Namibian Dollar (N$):

Gender	Average Annual Salary at Current Valuation	Average Annual Salary at Previous Valuation
Males	59 617	52 295
Females	61 995	53 321
Total	**60 806**	**52 761**

23. The average annual salary of the Fund has increased by 15.2% during the Valuation Period. This translates into an average annual increase of 4.8% per annum in the annual salaries of Members.

24. The average age weighted by annual salary for Active Members is summarised below:

Gender	Average service weighted by Annual Salary at Current Valuation	Average service weighted by Annual Salary at Previous Valuation
Males	41 years 5 months	40 years 11 months
Females	41 years 1 month	40 years 6 months
Total	**41 years 3 months**	**40 years 9 months**

25. The average age weighted by annual salary for all Members has increased slightly from 40 years and 9 months to 41 years and 3 months.

26. The average service weighted by annual salary is summarised below:

Gender	Average service weighted by Annual Salary at Current Valuation	Average service weighted by Annual Salary at Previous Valuation
Males	12 years 5 months	11 years 2 months
Females	13 years 1 month	12 years 0 months
Total	**12 years 9 months**	**11 years 7 months**

27. The average service weighted by annual salary for all Members has increased from 11 years and 7 months to 12 years 9 months.

28. There has been an increase of 1 year 2 months in the average service weighted by annual salary. This represents the fact that generally the Membership of the Fund remains in service and do not change their jobs frequently. Therefore the salary weighted average age will be expected to rise before stabilising when the older higher salaried Members retire and are replaced by the younger ones

29. There were 7 753, 4 083 and 9 994 Member Pensioners, Qualifying Spouses and Children respectively receiving a pension as at the Previous Valuation Date. At this Valuation, the numbers of Member Pensioners, Qualifying Spouses and Children are summarised as follows:

Number	Member Pensioners	Spouses	Children	Total
Males	6 376	745	8 782	15 903
Females	3 768	5 038	9 287	18 093
Total	**10 144**	**5 783**	**18 069**	**33 996**

Notes:

- As at Valuation Date, there were 925 annuitants temporarily not receiving a pension due to various reasons, for instance confirmation of existence letter not submitted. The value of their Benefits has been provided for under Pensioners Liability taking into account that in most cases the pension is resumed and outstanding amount paid in arrears.

30. The average ages of all the annuitants/Pensioners is summarised in the following table:

	Member Pensioners	Spouses	Children
Males	66 yrs 0 mths	54 yrs 3 mths	15 yrs 3 mths
Females	64 yrs 9 mths	52 yrs 4 mths	15 yrs 3 mths
Total	**65 yrs 6 mths**	**52 yrs 7 mths**	**15 yrs 3 mth**

31. The total annual pensions in payment for the various categories of Pensioners is summarised below:

	Member Pensioners (N$ 000's)	Spouses (N$ 000's)	Children (N$ 000's)	Total (N$ 000's)
Males	113 521	18 699	60 847	193 067
Females	77 248	105 969	64 284	247 475
Total	**190 769**	**124 669**	**125 131**	**440 543**

32. The average annual pensions in payment for the various categories of Pensioners is summarised below in Namibian Dollars (N$):

	Pensioners	Spouses	Children
Males	17 708	25 100	6 929
Females	20 501	21 034	6 922
Total	**18 806**	**21 558**	**6 925**

33. At the Valuation Date there are 505 (excluding 2 stopped/cancelled) Disabled Members receiving a pension and contributing to the Fund compared to 431 at the Previous Valuation. The following is a summary of details for Disabled Members receiving an income:

	Number at Current Valuation	Annualised Disability Income at Current Valuation (N$ 000's)	Number at Previous Valuation	Annualised Disability Income at Previous Valuation (N$ 000's)
Males	302	14 447	271	10 416
Females	203	8 722	160	5 711
Total	**505**	**23 169**	**431**	**16 127**

LIABILITY VALUATION METHODOLOGY AND BASIS

Methodology

34. The method used to place a value on the past service liabilities and the required future contribution rate is known as the projected unit credit method. This method is suitable given the nature of the Fund, being open to new entrants.

35. The projected unit credit method determines the required future contribution rate as the cost of Benefits accruing in the year following the Valuation Date, expressed as a percentage of Pensionable Salaries as at the Valuation Date.

36. The Methodology used in this Valuation is consistent with that used in the Previous Valuation and consistent with the nature of the Fund.

Past Service

37. For Active Members, the past service liability is determined as the discounted expected present value of Retirement, Withdrawal, Death and Disability Benefits that have accrued up to the Valuation Date based on projected salaries to the date of Retirement or earlier Death or Withdrawal or Disability.

38. For Members in receipt of Disability Income Benefits, the past service liability is determined as the present value of the future Disability Income Benefits plus discounted expected present value of retirement benefits that have accrued.

39. For Pensioners, the past service liability is determined as the present value of expected future pension payments. The Pension increase granted as at 1 April 2009 has been taken into account when determining the liability.

40. A Longevity Reserve has been introduced to protect the Fund against the impact of improvement in Mortality. This is described in Appendix H.

41. An Employer Contribution Reserve has been introduced to protect the Employer(s) from facing volatile contribution rates. This is described in Appendix H.

42. A Data Reserve equal to 5% of the total of the Active Member, Pensioner and Disability Income liabilities is held.

43. An AIDS Reserve is held to act as a buffer against the impact of deteriorating Mortality and Morbidity experience caused by HIV/AIDS.

Future Service

44. The required future contribution rate is determined as the total cost of Benefits accruing in the year following the Valuation Date expressed as a percentage of the total Pensionable Salaries as at the Valuation Date.

45. The required future contribution rate will remain relatively stable provided the Membership of the Fund remains stable. This assumes that exits are replaced by new entrants with profiles that keep the Membership stable.

Basis

46. In order to calculate the value of the assets and liabilities, it is necessary to make assumptions. The set of assumptions is termed the Valuation basis and is briefly described below. It is described in more detail in Appendix E.

47. The important characteristics of a Valuation basis are:
    - The assumptions take into account the expected long-term experience of the Fund.
    - The assumptions aim to produce a stable estimate of the required future contribution rate of the Fund.

48. Neither the method nor the assumptions used affect the ultimate cost of providing the Benefits promised by the Fund. They only affect the timing of how this ultimate cost is met.

49. It should be noted that the relationships between the various financial assumptions are more important than the nominal value of each individual assumption.

50. The main financial assumptions are the same as in the Previous Valuation, they are as follows:

	Relevant Assumption	Figure
Pre-Retirement	Inflation	8.0 %
	Investment returns	12.0 %
	Salary Increases	9.5 %
Pre-Retirement	Investment returns	12.0 %
	Pension Increases	8.0 %

51. Pension increases are thus expected to equal inflation over the long-term.

ASSETS

Net Asset Value

52. The Net Asset Value of the Fund, per the audited Financial Statements, was made up as follows as at the Valuation Date:

	N$ 000's
Invested Assets:	
• Allan Gray Namibia	4 377 210
• Alliance Bernstein	1 760 708
• Investec Asset Management	5 106 964
• Namibia Asset Management	5 566 734
• Old Mutual Asset Management	3 072 441
• Prudential Portfolio Managers	962 703
• RMB Asset Managers	1 445 150
• Sanlam Investment Management	4 599 348
• State Street Southern Africa	79 247
• Sovereign Asset Management	963 085
• Wellington Management Company	2 108 964
• GIPF Direct Investment	74 132
	30 116 686
Property, Plants & Equipment	74 297
Bank Account	97 008
Contributions Receivable	73 019
Net Accounts Payable	(28 343)
Benefits Payable (incl. Unclaimed Benefits)	(391 818)
Net Asset Value (Market Value)	**29 940 849**

Asset Composition

53. The investment sector composition of the Fund's Net Asset Value, is shown as follows as at the Valuation Date:

Asset Type	%
Equities	63.1 %
Fixed Interest Assets	23.4 %
Cash and Net Current Assets	12.9 %
Property	0.6 %

Asset Valuation Methodology

54. The method used to value the assets was chosen to be consistent with the method used to value the liabilities

55. The asset type composition of the Fund is expected to prove quite volatile over the short-term. To achieve more stability in the Actuarial Value of Assets, a Notional Asset Allocation is used. This is consistent with the liability profile of the Fund and is expected to show a long-term average for the Fund.

56. The Notional Asset Allocation as at the Valuation Date is the same as at the Previous Valuation Date and is as follows:

Asset Type	2009 %
Equities	67.0 %
Fixed Interest Assets	23.0 %
Cash and Net Current Assets	5.0 %
Property	5.0 %
TOTAL	**100.0 %**

57. Regulation 28 guidelines were amended in Namibia during the Inter-Valuation Period, we have commented on this in a separate document. Overall we are of the viewpoint that these changes will impact on the Fund, but also that the long-term investment return assumption of inflation + 4% p.a. remains a valid assumption, if no longer a conservative one.

58. The liabilities of the Fund are valued using long-term assumptions with respect to investment returns. It is therefore necessary to value the assets of the Fund on a similar basis in order to make valid comparisons. The Fund's assets are therefore valued by discounting expected future income streams using the Valuation rate of interest i.e. 12% per annum.

59. The Fund's equity component is valued by notionally investing in the JSE All-Share Index. Dividends are assumed to grow at 9.2% per annum. The dividend yield on the index was 4.8% as at the Valuation Date. Equities could thus be valued at about 170% of market value using traditional models.

60. It should be noted that the dividend yield on the Namibian Stock Exchange was higher than this (6.2%), implying an even higher valuation (over 200%) if this index were used as the gauge.

61. Investment markets were very low at the Valuation Date, which would lead to distorted dividend yields on their indices and this in turn can distort the valuation of the Fund's equities. Out of conservatism equities have been valued at 106.2% of market value.

62. Fixed Interest investments were valued at 84.1% of market value, by notionally investing in the R157 long-term fixed interest stock. The Namibian equivalent is the GRN 2015 fixed-interest stock. This has a slightly higher yield, which would have resulted in an Actuarial Value of 88% of Market Value had it been used.

63. Property is valued at 90% of market value while Cash and Net Current Assets are taken at face value.

64. The Asset Valuation Methodology is therefore overall consistent with the Previous Valuation, except that the Actuarial Value has been deliberately limited to the Market Value out of conservatism.

65. The assumption used is that the South African market returns act as a suitable proxy for both Namibian assets and international assets (allowing for inflation differentials and currency movement over time). This assumption will need to be analysed in more detail in future valuations, especially given the new Regulation 28 constraints.

Asset Valuation Results

66. The Actual Market Value, Notional Market Value and Actuarial Value of Assets as at the Valuation Date are summarised below:

	Market Value		**Actuarial Value**
	Actual (N$ 000's)	**Notional (N$ 000's)**	**N$ 000's**
Equities	18 896 070	20 060 369	21 305 876
Fixed Interest Assets	7 010 313	6 886 395	5 790 592
Cash and Net Current Assets	3 856 483	1 497 042	1 497 042
Property	177 983	1 497 042	1 347 338
TOTAL	**29 940 849**	**29 940 849**	**29 940 849**

67. The Actuarial Value of Assets as at the Valuation Date was therefore 100% of the Actual Market Value. As at the Previous Valuation Date, the Actuarial Value of Assets was 82.9% of the Actual Market Value.

68. Using the traditional Actuarial Asset Valuation model would give an Actuarial Value of Assets equal roughly to 140% of the Actual Value of Assets.

Investment Returns

69. Over the Valuation Period, the Fund earned an investment return of 4.6% per annum based on the Market Value of Assets and a corresponding return of 11.4% per annum on the Actuarial Value of Assets.

70. Namibian inflation averaged 8.6% p.a. during the Valuation Period, significantly higher than the investment return based on Market Values.

VALUATION RESULTS

Financial Position

71. The results of the Current Valuation are set out below. The Previous Valuation results are also shown:

	2009 Valuation N$ 000's	2006 Valuation N$ 000's
Value of Assets	**29 940 849**	**21 630 133**
Value of Liabilities / Reserves:		
Active Members	13 666 532	13 790 336
Pensioners (Including temporarily suspended)	5 586 819	3 314 848
Disability Income Recipients (including temporarily suspended)	173 540	261 279
Longevity Reserve	2 914 034	Zero
Employer Contribution Reserve	3 874 680	Zero
Data Reserve	971 345	868 323
AIDS Reserve	1 093 323	1 103 227
Total	**28 280 272**	**19 338 014**
Actuarial Surplus	**1 660 577**	**2 292 119**
Funding Level (Ratio of Assets to Liabilities)	**105.9%**	**111.9 %**

72. Although the Actuarial Surplus and funding level have reduced over the Valuation Period, this is due to new reserves being introduced. These are described in further detail in Appendix H. The funding level would have increased significantly (to 139.3%) if it were not for the introduction of these new reserves out of prudence. Overall the financial strength of the Fund has increased significantly over the Valuation Period.

73. The Pensioner liability of N$5.59 billion includes N$47.9 million held for 925 temporarily suspended annuitants due to non-compliance reasons. The Disabled member liability of N$173.5 million includes N$1.4 million held for 2 temporarily suspended annuitants due to non-compliance.

74. The Longevity Reserve has been set at 15% of the Fund's liability in respect of Active Members, Pensioners and Disability Income Recipients. This reserve

has been set aside to cater for the possibility of longer life spans for Members after retirement, pensioners, spousal annuitants and more dependants claiming child annuities due to extended studies.

75. The Employer Contribution Reserve has been set to protect the Employer(s) from fluctuating contribution rates.

76. The Data Reserve has been set at 5% of the Fund's total liabilities. The Data Reserve is mainly to fund for any possible increase in liabilities resulting from possible data errors and ad hoc admissions to membership of those Eligible employees whose records are neither on the GIMIS system nor part of the Valuation data.

77. The AIDS Reserve has been set at 8% of the Fund's liability in respect of Active Members. This was determined using a statistical model to assess the impact of worsening HIV/AIDS experience in Namibia.

78. These Reserves have been set at levels which (in our opinion) are justifiable for the Fund.

Matching of Assets and Liabilities

79. The liabilities of the Fund can be separated into two groups based on how they react to inflation. Inflation is here taken to mean either Consumer Price Inflation or inflation-related salary increases.

80. It should be noted that we value the liabilities of the Fund treating pension increases as a liability, although we realize that these are not guaranteed. Pension increases are granted subject to affordability. There is therefore a high likelihood that they will be granted, but there is no guarantee.

81. If we valued the Fund's liabilities with no allowance for pension increases but treated these as purely discretionary, there would be a substantial decrease in Fund liabilities.

82. Liabilities which do not increase with inflation are best backed by assets which have known income payments and maturity values e.g. cash and fixed interest securities.

83. Examples of this guaranteed portion of the Fund's liabilities are:

- The liability in respect of Pensioners to secure the current level of pension with no further increases;
- The present value of Active Members' accrued service pension with no provision for future salary increases to Date of Retirement and Pension Increases thereafter;
- The liability in respect of Active Members whose benefits are to be paid in the near future on Retirement, Ill-Health, Death or Withdrawal; and
- A portion of the Longevity, Data and AIDS Reserves.

84. We have estimated that about 25% of the Fund's liabilities fall in this category.

85. The balance of the Fund's liabilities, that increase with inflation and are not guaranteed, are best matched by growth assets e.g. equities and property. Examples of these liabilities are:

- The liability in respect of Pensioners to secure inflation-related pension increases in future;
- The liability in respect of Active Members reflecting the long-term provision of salary-related Retirement Benefits;
- The liability in respect of pension increases of the Active Members' accrued pension rights; and
- A portion of the Data and AIDS Reserves.

86. The Fund can therefore maximise its long-term return, subject to minimising the risk of not being able to meet its liabilities by investing 20% to 25% of its assets in interest-bearing securities and cash, with the balance of 75% to 80% invested in growth assets. We recommend that no more than 5% be held in cash over the medium term as the income currently exceeds the expenditure of the Fund.

87. As at the Valuation Date, based on market values, the Fund held 23.4% of its assets in interest-bearing securities and 12.9% in cash and other current assets. The remaining 63.7% of assets were held in growth assets (equities and property).

88. The current cash holding does appear to be excessive, but is typically the result of the investment managers holding cash balances than expected due to the realignment of strategies.

89. We are overall satisfied that the Fund's asset mix is a satisfactory match for the Fund's liabilities.

Required Contribution Rate

90. Based on the Current Rules the contribution rates required for future service at the Current and Previous Valuation are set out below:

Contribution Rate required for:	31 March 2009	31 March 2006
Retirement Benefits	15.9%	17.4 %
Disability Benefits	1.4%	4.7 %
Death Benefits	13.0%	9.9 %
Resignation Benefits	0.7%	0.7 %
Funeral Benefits	0.3%	0.1 %
Fund Expenses	1.6%	1.3 %
Total Required Contribution Rate	**32.9%**	**34.1 %**
Less Member Contribution Rate	**7.0%**	**7.0 %**
Total required Employer(s) Contribution Rate	**25.9%**	**27.1 %**

91. The Total Contribution Rate has decreased slightly to 32.9%. This is largely due to the changed methodology in valuing the Fund's Risk Benefits, payable on Death and Disability.

92. The Employer(s) are currently contributing at 16.0%. The Employer Contribution Reserve has been set up in order to reserve for this difference over time.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

93. The Valuation revealed liabilities and reserves of N$28.280 billion whilst the Actuarial value of the assets was N$29.941 billion. The Actuarial Surplus amounted to N$1.661 billion as at Valuation Date. Therefore the funding level as at the Valuation Date was 105.9%.

94. We have made provision for additional liability that may result from possible data errors and membership omissions. In addition, we have set aside a Longevity Reserve to cushion the Fund against pensioners drawing out more income than expected as a result of longer life spans. The AIDS Reserve is held to protect the future financial position of the Fund against worsening HIV/AIDS among the young Membership of the Fund. The Employer Contribution Reserve is held to protect Employer(s) from fluctuating contribution rates.

95. A typical guideline is that it is best for a fund of this nature to have a funding level of between 105% and 115% over time. However, the level of conservatism included in the assumptions and methodology should be noted. This Valuation has been prepared on overall conservative basis.

96. Although the Actuarial Surplus and funding level have reduced over the Valuation Period, this is due to new reserves being introduced. The Surplus would have increased significantly (to 139.3%) if it were not for the introduction of these new reserves out of prudence. Overall the financial strength of the Fund has increased significantly over the Valuation Period.

97. The current asset mix is adequate for the nature of the current Fund's liabilities. The Trustees have implemented a suitable investment strategy which makes allowance for the nature of the Fund and for the revised Regulation 28 guidelines.

Recommendations

98. The Trustees should monitor the Employer Contribution Reserve over time to assess its suitability for financing the subsidy and smoothing the required contribution rate(s).

99. We recommend that no more than 5% be held in cash assets over the medium term. The income currently exceeds the expenditure of the Fund but the gap is narrowing every year thus regular review of the cash reserve is recommended.

100. The Trustees should still consider improving risk management strategies on the Fund. The current self insurance arrangement is still expected to result in increasing outgo which could mean that this could become a problem at a later stage.

101. We recommend that the Fund fully set up a Risk Reserve Account to cater for Disability and Death in Service Benefits. This should allow the Fund Accountants to monitor the movement in allocated reserves and attach appropriate assets as back up. An analysis of experiences can be carried out and compared with other risk insurers.

102. There were some problems with the data employed for this Valuation though we have noted that the quality of the data has continuously improved over the Valuation Period. The Fund administrators should check the problems highlighted and rectify them before the next Valuation. There is still need to set up a data audit team or assign a quality controller whose main role will be to maintain and enforce the requirements of a clean data for all major exercises. This will enable a more accurate representation of the financial position of the Fund in future.

103. There was again a substantive improvement in the data between the 2006 and 2009 Valuation Dates. However, to allow for prudence a significant Data Reserve has been retained in the Fund. This can be reviewed in the 2012 Valuation and it is anticipated that the majority (if not all) of the Reserve could be removed at that time. This is due to the continual improvement in data management by the Fund's administrators.

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March 2010

APPENDICES

APPENDIX A: SUMMARY OF RULES, BENEFITS AND CONDITIONS

A.1. The main Rules, Benefits and Conditions of the Fund are set out below:

Retirement Age

A.2. The Normal Retirement Age is 60 years for all Members except for Members who have Retirement Ages changed in terms of the Public Service Act (Act 13 of 1995) and individual employment contracts.

Pensionable Service

A.3. Pensionable Service shall be the number of years and completed months of service with the Employer(s).

Final Salary

A.4. Final Salary shall be the average annualised Pensionable Salary for a period not exceeding twelve months preceding Retirement.

Contributions

A.5. Employees contribute 7% of their Pensionable Salary.

A.6. Employer(s) contribute the balance of the costs required for Retirement Benefits, Withdrawal Benefits and Expenses. The Employer(s) currently contribute at a rate of 16% of Pensionable Salaries.

Expenses

A.7. All expenses incurred in the administration and management of the Fund are borne by the Fund. These include investment expenses, administration fees, audit fees and other fees.

Benefits

Pension Benefit on Normal Retirement

A.8. 2.4% of the Final Salary for each year of Pensionable Service guaranteed for 60 months. All the pensions are paid monthly in arrears.

Pens*ion Benefit on Ill-Health Early Retirement*

A.9. With the approval of Trustees a Member may retire due to Ill-Health of a protracted nature at any age. The Member is entitled to a pension calculated as in A.8 above.

Pension Benefit on Early Age Retirement

A.10. A Member may voluntarily retire on Early Age Retirement within 5 years of Normal Retirement. The pension calculated as in A.8, based on Pensionable Service up to the date of Early Retirement, is reduced by 0.25% for each month separating the actual and the Normal Dates of Retirement.

Pension Benefit on Early Retirement for Reasons other than Age or Ill-Health

A.11. With the approval of the Trustees a Member may retire early due to dismissal for reasons of re-organisation, unsuitability and inability to perform work. The pension calculated as in A.8, based on Pensionable Service up to the date of Early Retirement, is increased by Pensionable Service as stipulated below:

- The shortest of 1/3 of Member's Pensionable Service, the period between the actual and Normal Retirement Dates or five years.
- For permanent Secretaries on renewable employment contracts for various Ministries, an additional 1/2 of the period which he / she occupied office referred to in section 2(3) of the Public Service Commission Act, 1990.

Commutation

A.12. A Member may at any time prior to their Retirement Date opt to commute up to 1/3 of their pension, to be received as a lump sum on retirement.

A.13. The full Pension Benefit can be commuted for a lump sum if the annual Pension is less than N$20 000.

Death after Retirement

A.14. The balance of the first 60 monthly pension instalments will be payable.

A.15. The spouse of a married Member will also be entitled to a pension of 50% of the Member's pension payable immediately after the greater of the date the member died or the date of the expiry of the first 60 monthly pension instalments.

Death in service before Normal Retirement Age

A.16. On Death in service of a Member the following benefits become payable:

- A Lump Sum of two times the Pensionable Salary at the time of Death plus
- A Spouse's Pension equal to 40% of Pensionable Salary plus
- Children's Pensions of 10% of the Pensionable Salary per child with a maximum of 30% OR where there is no qualifying spouse, 20% of the Pensionable Salary per child with a maximum of 60%.

Resignation

A.17. A Member is entitled to a cash refund calculated according to a formula in the Rules. The formula approximates to a refund of 5% simple interest. Or,

A.18. A Deferred Pension for a Member with more than 10 years service to be purchased by the Member's accrued Actuarial Reserve. Or,

A.19. A Transfer Amount equivalent to the accrued Actuarial Reserve can be transferred to an approved Pension or Retirement Annuity Fund of the Member's choice.

Disability Benefit

A.20. With the approval of the Commission a Member may leave employment on becoming Totally and Permanently Disabled. The Member is entitled to 75% of Pensionable Salary for the first 2 years and 50% thereafter.

A.21. The Member is required to continue to contribute at 7% of the Disability Income. According to the Current Rules, the Disability Income is increased in line with salary increases.

A.22. The Benefit ceases on Death, reaching Normal Retirement Age or when a Member ceases to be a Member of the Fund.

A.23. According to the Current Rules, the Final salary to be used on Retirement or Death Benefits is derived from the Disability Income by dividing by 75%.

APPENDIX B: ANALYSIS OF FUND MEMBERSHIP

B.1. This Appendix contains details of approximate Membership build ups based on the latest data supplied and information in the Previous Valuation Report.

Active Members

B.2. In putting together the summary of the Active Membership build up below, we relied on the data that was put together and checked as detailed in Appendix C.

Membership at Previous Valuation	
• Members below age 60 years	84 195
• Members above age 60 years	386
Total Members	84 581
Plus:	
New Members on the Fund	
• Members joining Fund during Valuation Period	11 203
• Members added on GIMIS	12 180
Total new Members	23 383
Less:	
Members who exited the Fund	
• Retirements	- 2 580
• Deaths	- 868
• Resignations	- 6 632
• Disabled Members	- 163
• Transfers (Section 14)	- 439
• Members unmatched included in last valuation	-13 351
• Other Exits	- 1 726
Total Exits	-25 759
Membership this Valuation	82 205
• Members below age 60 years	81 998
• Members above age 60 years	207

B.3. The Active Membership data for the Previous Valuation was retrieved from GIPF data resources. Included in the previous valuation membership were 3 573 members who have remained on the payroll list but whose records are not yet recorded by the Administrators. On the other hand, there were 3557 members on GIMIS whose records could not be matched with available payroll data.

B.4. The schedule of new entrants revealed that there were 11 203 Members who joined GIPF during the Valuation Period and had their records installed on GIMIS. In addition, 12 180 Members whose records were installed on GIMIS during the Valuation Period but were admitted as Members prior to the Previous Valuation Date.

B.5. Of the 2 540 Retirements, 2 360 occurred during the Valuation Period and payments were settled in the same interval whilst 180 were not yet settled as at the Valuation Date.

B.6. There were 868 deaths excluding 108 Pensioners paid during the Valuation Period. In addition there were, 2 278 Death claims which occurred before the Previous Valuation Date but settled during the Valuation Period. Some of the members were part of the Previous Valuation Active Membership and we have classified them under Other Exits this Valuation.

B.7. There were 6 632 Resignations that occurred during the Valuation Period and their benefits were paid as cash to the member or transferred to other approved Funds during the same interval.

B.8. During the Valuation period, there are 439 Members whose benefits were transferred from GIPF under section 14. The Employers who transferred their Members during the Valuation Period are Namfisa (39), Eenhanna Town Council (39), Roads Authority (307) and Namibia Standards Institute (54).

B.9. Other exits include those Members who could be exits at this Valuation Date but whose details we do not have.

B.10. During the valuation period there were 3 893 Funeral benefits paid in respect of Members and Qualifying Spouses and Children.

Pensioners

Pensioners at Previous Valuation Date	21 880
• Suspended Pensioners	+3 860
• Duplicates	-8
Adjusted Pensioners at Previous Valuation Date	25 732
Plus:	
New Pensioners:	
• Installed records not on GIMIS last valuation	8 794
• Retirees, Qualifying Souse, Children	4 723
Total new Members	13 517
Less:	
Exited /Cancelled Pensioners:	
• Deaths	-1 146
• Children reaching maturity age or Above 25 years	-1 999
• Other reasons (e.g unwanted multiple records)	-2 183
Total Exited /Cancelled	-4 328
Pensioners this Valuation Date	34 921
Actively Receiving a pension	33 996
Temporarily Suspended	925

B.11. 21 880 Pensioners were in receipt of a pension as at the Previous Valuation Date. In addition there were 3 860 Suspended Pensioners.

B.12. Other Reasons for pensioners to be cancelled were to maintain one record by removing unwanted duplicate records and to avoid over estimation of liability by qualifying some pensioners who have been on suspension for longer than 3 years.

B.13. The expected liability in respect of the 925 Suspended Pensions as at this Valuation Date was placed under the Pensioners Liability. However, the liability in respect of annuitants who could have been mistakenly classified as "permanently " stopped/cancelled due to resurfacing of claimants and subsequent reinstatement of beneficiaries, is catered for under data reserve.

Disabled Members

Disabled Members at Previous Valuation Date	431
• Suspended Disabled Members	+ 6
• Duplicates (excess records removed)	-1
Adjusted Disabled Members	436
Plus:	
New Disabled Members	198
Less:	
Exited / Cancelled Disabled Members	
• Deaths	- 6
• Retirements	-105
• Terminated transfers	- 12
• Stopped/Cancelled for other reasons	-4
Total Exited / Cancelled	- 127
Disabled Members this Valuation	507
Actively receiving an income	505
Temporarily suspended	2

B.14. There were 505 Members receiving Disability Income and contributing to the Fund. In addition, there were 2 Disabled Members who were on suspension at this Valuation Date.

B.15. The expected liability in respect of the Suspended Disabled Members is included in the Disability liability.

APPENDIX C: SUMMARY OF DATA CHECKS

C.1. This Appendix contains details of the data checks performed on the Valuation Data received and estimations done on the data. Some data queries could not be resolved immediately as it could require more time. For instance some queries require referral to the Employer and the turn- around times could be outside GIPF control. Actuaries will assists with advice on data clean up as a continuous improvement process.

Member Data

C.2. In building up the Active Membership data we used the following information:

- Data as at 31 March 2009 provided by the administrators as generated from the administrators' system (GIMIS).
- Data as at 31 March 2009 taken from payroll data ("Payroll") from various Employers participating in the GIPF.
- Data as at 31 March 2006 provided by the administrators as generated from the administrators' system (GIMIS).
- Data as at 31 March 2006 taken from payroll data ("Payroll") from various Employers participating in the GIPF.

C.3. In completing the Valuation we carried out a matching exercise, in which we separated those Members who were on both GIMIS and Payroll from those who could not be matched. The administrators have set up there own methods to track unmatched data as a continuous exercise to clean the data.

C.4. The matching exercise involved comparing fields on both GIMIS and Payroll and then extracting records with same details in major fields. The major fields used for the matching exercise were in respect of the Employer Name, National Identity Number, Payroll Number, Names, Date of Birth and Date of Admission.

C.5. Of those recorded as actives (including above 60 years but below age 67 years) the Fund's Active Membership records on GIMIS is 78 642 (excluding 6 "excess" duplicate records). The Active Membership records on Payroll from various Fund Employers totalled 78 648 (excluding 91 "excess" duplicate records). Of those actives on payroll list, about 75 075 Membership records could be matched with records on GIMIS. Thus, there were 3 573 records on Payroll who did not match and conversely 3 557 records on the GIMIS could not be matched. This suggests a significant improvement in data quality resulted in more members matching.

C.6. There were 207 Members aged above 60 years but below 67 years. The Rules of the Fund allow Members of a specific class to retire at any age after or before the age of 60 years in terms of the Public Service Act (Act 13 of 1995). However, the administrators confirmed that it is possible that these Members could either be in Active Employment as a result of the extended employment contracts in terms of the Act. However, it was noted that some members whose details imply that there are aged above 60 years, could instead be aged below 60 years but have incorrect date details. Some members could be on the list because their benefits have not yet been finalised or Employer has not submitted a claim as at this Valuation Date. An investigation will be carried to investigate the group of Members aged above 60 years.

C.7. There were no members above 67 years this valuation but there were 50 Previous Valuation. All the 50 members above 67 years were investigated and those above 67 years were retired whilst those below 60 years whose age details were not correct continued as active members.

C.8. Therefore the total Active Membership for this Valuation was taken as 82 205 and is composed of 75 075, 3 577 and 3 573 matched, unmatched GIMIS records and unmatched payroll records respectively.

C.9. For this data, after discussing the comparative reliability of the GIMIS and Payroll data with the administrators, we ensured that the following details were included:

- Date of birth as reflected on GIMIS for matched and unmatched records except for records not found on GIMIS.
- Date of admission as reflected on GIMIS for matched and unmatched records except for records not found on GIMIS.
- Gender as reflected on GIMIS for matched and unmatched records except for records not found on GIMIS whose details were assumed.
- Pensionable Earnings as reflected on Payroll for matched and unmatched records except for records not found on Payroll.
- Details for Members found on GIMIS but not on the Payroll were assumed to be correct and only estimated where they were not reasonable. Details for Payroll records not on GIMIS were only assumed or estimated if they were missing or not reasonable.

C.10. There were Members with out of range date of births. In cases where the national identity "ID" number was given, date of birth was derived from the first 6 digits of the ID instead of using a group average.

C.11. There were a few Members for who had blank current salaries, date of admission and gender. The administrators confirmed that this is possible and could have partly been due to outstanding information from the Employers or an outstanding investigation process on Member Fund Status is preventing record updates. For this Valuation Report we used the averages or ratios of their respective Employer(s) Membership in estimating missing data points.

C.12. Where applicable, salary on 1 April 1992 and starting salary for each individual Member were estimated from current salary using average salary increases awarded to civil servants.

C.13. The Resignation Cash Benefits were estimated using formula in the Rules.

C.14. The Age at Admission and Valuation Date for individual Members were checked and most of them were within reasonable ranges. Where the details were in conflict with the minimum entry age, the Member's date details were estimated.

C.15. We calculated a number of Membership statistics (stated below). These statistics were checked for reasonability:

- Earnings-weighted ages
- Earnings-weighted service
- Average Pensionable Earnings

Pensioner Data

C.16. There were 33 996 Pensions in payment split into 10 144 Members' Pensions, 5 783 Spousal Annuities and 18 069 Children's Annuities. In addition there were 925 Pensions which were on suspension as at this Valuation Date.

C.17. For the Pensioners in the data received we ensured that the following details were included:

- Date of birth
- Date of commencement of pension
- Gender
- Annual pension
- Type of pension and its status

C.18. A reconciliation of Pensioner's Data for this Valuation and Previous Valuation, Stopped Pensions, Retirements, Surviving Spouses, Children and information on financial accounts was carried out. There were no major problems that we encountered with the data. However, the following minor problems were observed:

- Conflicting Member details like Pensioners with Annuity type as Child Annuitant whose ages suggest that they are not dependants. For that reason, child annuitants receiving a pension and are over 25 years of age were not considered as part of the current pensioners or annuitants.
- Members appearing as both Stopped Pensioners and as Pensioners still receiving a pension. The record with the "Stopped" status was excluded from the main pensioner data.
- Retirees whose pension payment is still pending but there ages suggest that they could have been waiting for a benefit for more than 5 or more years.
- Death claims whose Funeral Benefits have been paid but surviving spouse and children pensions still outstanding.
- Schedules from accounts do not show pension instalments separately from Disability Income payments.

C.19. We performed the following reasonability checks to ensure the integrity of the Pensioner's personal details:

- Dates are valid
- Dates in logical order and consistent
- Pension amounts within reasonable ranges
- Ages within reasonable ranges
- Commencement dates of pensions were after the Pensioner's date of birth.

Disabled Member Data

C.20. There were 505 Members receiving Disability Income and contributing to the Fund. In addition, there were 2 Disabled Members who were on suspension at this Valuation Date.

C.21. For the Disabled Members Data received we ensured that the following details were included:

- Date of birth
- Date of commencement of Disability Income
- Gender
- Annual income

C.22. A reconciliation of Disabled Members' Data for this Valuation and Previous Valuation, Stopped Disabilities and new Disability Income Recipients. The following problems were encountered and resolved:

- There was one Disabled Member whose record appeared twice and we have kept one record.
- From the financial accounts, Employer contributions in respect of the Disability Income Recipients could not tally with contribution levels derived from the incomes of the disabled members.
- There were 6 Suspended Disability Income Recipients and 1 record which appeared twice in the Previous Valuation data. The suspended members were taken as part of the 2006 disabled members list. The excess record due to duplication was removed from the data.
- There were 105 Deaths and Retirements out of the Disabled Members. The Final Salary used in calculating their Benefits is based on a formula that was approved and recommended by the previous actuaries from Alexander Forbes.

C.23. We performed the following reasonability checks to ensure the integrity of the Disabled Members' personal details:

- Dates are valid
- Dates in logical order and consistent
- Disability Income amounts within reasonable ranges
- Ages within reasonable ranges

Exits (Funeral Benefits, Deaths, Retirements and Resignations)

C.24. During the Valuation Period a total of 3 893 Funeral Benefits were paid on Death of Members, Qualifying Spouses and Children.2 247 of the Funeral Benefits paid were in respect of Deaths which occurred during the Valuation Period and 1 646 were for Deaths before the Previous Valuation. Of the 3 146 Deaths processed during the Valuation Period, 2 247 Funeral Benefits were paid on Death of Active Members. Amounts paid as Funeral Benefits were found to be in line with current rates in the Rules.

C.25. There were 3 146 Deaths which were finalised during the Valuation Period. Of these, 2 278 died before Previous Valuation Date. The remainder of the deceased Members include 868 Members who died during the Valuation Period. There were also 108 deaths among the pensioners.

C.26. There were 2 540 Retirements (Normal, Early Age and Ill-Health) which were recorded during the Valuation Period. Of these, 2 360 retired during the Valuation Period and 180 were still not paid as at Valuation date.

C.27. 5 867 Members had their Resignation Benefits settled during the Valuation Period whilst 475 were not yet settled on this Valuation Date. 5 385 of the settled resignation claims transferred their Benefits to other approved Funds and 482 were paid cash. 5232 Resignations occurred during the Valuation Period and 1 146 were claims submitted before the Previous Valuation Date.

C.28. There were 439 members whose transfer values of assets were transferred to other approved Funds in accordance with Section 14 of the Pensions Act. The Employers who transferred their Members during the Valuation Period are Namfisa (39), Eenhanna Town Council (39), Roads Authority (307) and National Standards Institute (54).

C.29. We ensured that data received contained the following

- Date of birth
- Date of payment
- Date claim made
- Gender
- Amount(s) paid

C.30. We performed the following reasonability checks to ensure the integrity of the exited Members' personal details:

- Dates are valid
- Dates in logical order and consistent
- Amounts paid within reasonable ranges
- Ages within reasonable ranges

New Entrants

C.31. There were 23 383 Members who became part of the Active Membership during the Valuation Period. Of these, 11 203 are those Members whose dates of admission suggest that they joined the Fund during Valuation Period. The other 12 180 are Members' whose records show that they were admitted prior to the Previous Valuation Date but their details were not yet loaded as Active Members on GIMIS.

Investment Reports and Financial statements

C.32. We were provided with Investment Reports and Financial Statements covering the Valuation Period. The value placed on assets as reported by Investment Consultants and as presented in the Audited Financial Statements were compared. There were deviations which were explained as resulting from the revaluation of assets; these were subsequently fixed.

APPENDIX D: FUND ACCOUNT

D.1. The movement in the Fund's Net Asset Value (i.e. effectively Market Value) over the Valuation Period is summarised as follows (based on the Fund's audited Financial Statements):

	2007 N$ 000's	2008 N$ 000's	2009 N$ 000's
Opening Net Asset Value	26 080 601	33 393 506	35 117 744
Contributions - Member	306 436	327 028	355 004
Contributions - Employer	701 357	745 374	811 612
Fund Expenses	-65 764	-75 033	-83 090
Transfers to other funds	-	-32 330	-73 858
Transfers from other funds	19	27	-
Pension benefits	-381 795	-415 855	-466 225
Retirement lump sums	-103 673	-95 192	-133 876
Death benefits	-103 030	-102 565	-142 590
Withdrawal benefits	-253 060	-304 331	-345 333
Funeral benefits	-5 651	-4 645	-4 162
Investment Income & Capital growth	7 204 754	1 666 739	-5 109 979
Other Income	13 312	15 021	15 602
Closing Net Asset Value	**33 393 506**	**35 117 744**	**29 940 849**
Net investment return	**27.63%**	**5.03%**	**-14.52%**
Fund Expenses/Annual Payroll	**1.50**	**1.61%**	**1.64%**

D.2. Over the Valuation Period, the Fund earned an average net money-weighted investment return of 4.64% per annum based on the above Market Value of Assets.

D.3. The investment income in each Financial Year is net of management fees

D.4. Contributions recorded include those made by Disabled Members.

D.5. The Benefit Amounts include all benefits that were paid in respect of Retirees, Resignations, Disabilities, Deaths and Funeral Benefits

D.6. The Fund Expenses as a percentage of annual payroll averaged 1.59% per annum over the Valuation Period.

APPENDIX E: ACTUARIAL BASIS

E.1. The actuarial assumptions used in determining the liabilities of the Fund are as follows:

Financial Assumptions

E.2. The following annual financial assumptions were used:

	Assumption	Current Valuation 31/3/2006	Previous Valuation 31/3/2003
Pre-Retirement	Inflation	8.0 %	11.0 %
	Investment returns	12.0 %	15.0 %
	Salary Increases	9.5 %	12.5 %
Post-Retirement	Investment returns	12.0 %	15.0 %
	Pension Increases	8.0 %	11.0 %

E.3. The Pensionable Salary increase and investment return assumptions reflect a pre-retirement 'real return' of 2.3% p.a. (i.e. investment return less salary increases).

E.4. This is very similar to the Previous Valuation, where the 15% p.a. assumed investment return and the 12.5% p.a. assumed salary escalation rate implied a real return of 2.2% p.a.

E.5. In addition, we have allowed for promotional salary increases (based on the experience of similar funds) as follows:

Age	Males (%)	Females (%)
20	3.7	4.5
25	3.7	4.4
30	3.7	3.1
35	3.7	1.4
40	0.9	0.1
45+	0.0	0.0

E.6. This is identical to the allowance made in the Previous Valuation.

E.7. Historically, the Trustees have typically decided annual pension increases by considering inflation levels, but subject to investment return performance and the financial strength of the Fund at the time. We have allowed for pension increases by valuing pensions at an interest rate of 4% p.a. This was also done in the Previous Valuation.

E.8. This effectively means that all investment returns in excess of 4% p.a. are available to allow for pension increases. This is expected to enable the Trustees (on average) to match pension increases to inflation over the long-term.

E.9. The Previous Valuation anticipated expenses at 1.3% of Pensionable Earnings. Over the Valuation Period, Fund Expenses equated to 1.6% of Pensionable Earnings.

Demographic Assumptions

Mortality

E.10. The following mortality tables were used for Valuation purposes:

In- Service: SA 56 / 62 rated down as follows:

Males	No rating
Females	5 years

Pensioners: PA (90)

E.11. Sample rates are shown below at specific ages:

Active Members			Pensioners		
Age	Males (%)	Females (%)	Age	Males (%)	Females (%)
30	0.16	0.15	60	1.61	0.70
35	0.20	0.16	65	2.50	1.19
40	0.29	0.20	70	3.86	2.04
45	0.48	0.29	75	5.91	3.46
50	0.79	0.48	80	8.96	5.82
55	1.25	0.79	85	13.34	9.63
60	1.93	1.25	90	19.42	15.52

E.12. These assumptions remain unchanged from that used in the Previous Valuation.

Withdrawals

E.13. The assumed rates of Withdrawal allowed for are shown in the table below; these are the same as in the Previous Valuation.

Age	Males (%)	Females (%)
20	5.0	5.0
25	4.1	4.1
30	3.1	3.1
35	2.2	2.2
40	1.4	1.4
45	0.7	0.7
50	0.0	0.0

Early Retirement and Ill-Health Retirement (Disabilities)

E.14. The reduction in pension of 0.25% for each month of Early Retirement ensures that Early Retirement will not have an adverse financial impact on the Fund. Therefore no explicit provision for Early Retirement was deemed to be necessary.

E.15. The assumed rates of Ill-Health Retirement (i.e. Disabilities) are shown in the table below; these are the same as in the Previous Valuation.

Age	Males (%)	Females (%)
30	0.10	0.10
35	0.10	0.10
40	0.10	0.10
45	0.15	0.10
50	0.25	0.15
55	0.40	0.25
60	0.60	0.40

Family Statistics

E.16. Based on similar funds and as per the basis in the Previous Valuation, it was assumed that 95% of Members are married and that husbands are 4 years older than their wives.

APPENDIX F: ANALYSIS OF SURPLUS

F1. The Actuarial Surplus in the Fund increased from N$2.292 billion to N$5.535 billion during the Valuation Period. The main sources of surplus and strain on the Fund during this time are summarised below:

	N$ million
Surplus as at 1 April 2006	2 292.1
Interest on Surplus	928.1
	3 220.2
Data Changes	1 944.3
Change in methodology	1 441.3
Investment Performance	(520.7)
Increases in Salaries and Benefits	2 305.3
Employer Contribution Subsidy	(1 654.2)
Mortality and Withdrawal Experience	550.9
Change in Reserves	705.2
Introduction of Longevity Reserve	(2 914.0)
Miscellaneous	456.9
Surplus as at 1 April 2009	5 535.3

F2. Interest on the Surplus as at 31 March 2006, based on the assumed rate of 12% p.a. over the Valuation Period, amounted to N$928.1 million.

F3. The data adjustments over the Valuation Period led to an increase in surplus of N$1 944.3 million. This was largely due to unmatched records having been deliberately double-counted in the Previous Valuation, out of conservatism.

F4. The change in methodology (moving more of the Death benefit liability to future serve) led to an increase in surplus of N$1 441.3 million.

F5. Based on the Actuarial Value of Assets, the Fund experienced a return of 11.4% p.a. during the Valuation Period compared to the 12% p.a. assumed rate. This led to a strain of N$520.7 million.

F6. Salary, Pension and Disability Income increases were all lower than the assumed rates. This lead to an increase in Surplus of N$2 305.3 million.

F7. The Employer Contribution Subsidy led to a reduction in the Surplus by N$1 654.2 million.

F8. Mortality and withdrawal experience was more favourable than expected; this led to an increase in the Surplus of N$550.9 million.

F9. The change in existing reserve values, allowing for the assumed investment return of 12% p.a., led to an increase in surplus of N$705.2 million.

F10. The introduction of the Longevity Reserve reduced surplus by N$2 914 million.

F11. Other minor, miscellaneous impacts had a net increase on the Surplus of N$456.9 million.

APPENDIX G: SENSITIVITY ANALYSIS

G1. The Valuation results were determined using a long-term interest rate or assumed investment return of 12% p.a. To test the sensitivity of the Valuation result to this assumption, we recalculated the results assuming rates of 11% and 13% p.a. respectively. All other assumptions are kept constant, except that the Employer Contribution Reserve was not considered here as this is an allocation of Surplus. The results are shown below.

G2. It can be seen that the Valuation results are relatively sensitive to this assumption.

Past Service Position

	11% Interest Rate N$ 000'S	12% Interest Rate N$ 000'S	13% Interest Rate N$ 000'S
Value of Assets	**32 245 282**	**29 940 849**	**27 889 389**
Value of Liabilities / Reserves:			
Active Members	16 556 443	13 666 532	11 429 202
Disability Income Recipients	196 369	173 540	154 912
Pensioners	6 216 947	5 586 819	5 065 708
Longevity Reserve	3 445 464	2 914 034	2 497 473
Data Reserve	1 148 488	971 345	832 491
AIDS Reserve	1 324 515	1 093 323	914 336
Total	**28 888 225**	**24 405 592**	**20 894 122**
Actuarial Surplus	**3 357 057**	**5 535 257**	**6 995 267**
Funding Level (Ratio of Assets to Liabilities)	**111.6 %**	**122.7 %**	**133.5 %**

Contribution Rate required for:	11% Interest Rate	12% Interest Rate	13% Interest Rate
Retirement Benefits	19.7 %	15.9 %	12.9 %
Disability Benefits	1.7 %	1.4 %	1.2 %
Death Benefits	15.2 %	13.0 %	11.3 %
Resignation Benefits	0.7 %	0.7 %	0.7 %
Funeral Benefits	0.3 %	0.3 %	0.3 %
Fund Expenses	1.6 %	1.6 %	1.6 %
Total Required Contribution Rate	**39.2 %**	**32.9 %**	**27.9 %**
Less Member Contribution Rate	**7.0 %**	**7.0 %**	**7.0 %**
Total required Employer(s) Contribution Rate	**32.2 %**	**25.9 %**	**20.9 %**

Future Service Contribution Rate

APPENDIX H: NEW RESERVES INTRODUCED IN THIS VALUATION

Longevity Reserve

H1. Internationally, defined benefit funds and schemes have been experiencing increasing strains caused by increased life expectancy. Pensioners are living significantly longer than expected, based on historic experience and research.

H2. It has been experienced internationally that pensioners are living up to an average of 10 years longer and this change has been experienced rapidly, within a time-period of 20 years.

H3. We have therefore seen it as an opportune time to introduce a Longevity Reserve, to enable the Fund to hold a reserve against this risk.

H4. Increased life expectancy has been the experience in the Developed World; its impact has not yet been felt in Sub-Saharan Africa. However, one must expect that medical development and general progress will also lead Africa to reach closer and closer to that experience.

H5. Pensioners within the Fund should be seen a select group. Therefore, despite the fact that recent experience has seen deteriorating life expectations in

Southern Africa, Fund pensioners are individuals who have already survived through the possible ravages of youth (notably the impact of HIV/AIDS) and are individuals who typically managed to achieve relatively long-service with their erstwhile employers.

H6. Therefore their life expectancy from the time of their retirement should be expected to be superior to that of the general population of Namibia.

H7. Orphan pensions are also being paid for longer periods of time as the relevant young people seek to further their education and thereby enjoy the benefit as long as possible. This is a positive step for these individuals and for the country, but this increased cost also needs to be reserved for.

H8. We have performed scenario analyses whereby we estimated the impact of pensioners surviving longer than expected, based on international norms.

H9. The increased cost varies for males and females and for different ages, but the range was found to be in the region of 10% to 13%. We decided to use a conservative estimate of 15% of liabilities for the Longevity Reserve.

Employer Contribution Reserve

H10. The Employer(s) have for over 14 years been paying a stable 16% rate towards the Fund. This is relatively high compared to what Employers typically pay towards retirement fund arrangements, the industry norm would be roughly 10%.

H11. In a defined benefit fund, the required contribution rate fluctuates over time depending on experience over time. Also, due to conservatism built into typical Actuarial Valuations, surpluses arise over time which then further complicates matters in respect of what contribution is really required from the Employer.

H12. Therefore an Employer Contribution Reserve has been set up, which is expected to be able to fund the difference between the actual contribution rate and the required contribution rate on a <u>best estimate basis</u> over the average future working lifetime of the Fund's Active Members (approximately 19 years).

H13. We calculated this figure to be equal to 69.2% of the Actuarial Surplus reflected prior to the introduction of this reserve on the <u>conservative basis.</u> The actual reserve figure was then set at 70% of this Surplus.

H14. It is essential that Trustees monitor the experience of this reserve over time to measure its adequacy in stabilising and smoothing contribution rates for all stakeholders.

H15. Another question will be how to increase the size of the Reserve to fund for the subsidy on the conservative basis, currently there is not sufficient Surplus in the Fund to do so. For example, the Data Reserve is expected to reduce in future as more of the data issues are resolved, this possible release of Reserves could instead be used to increase the strength of the Employer Contribution Reserve.

Impact on Fund's Financial Position

H16. The table below shows how the Fund's financial position has changed with the introduction of the Longevity Reserve and Employer Contribution Reserve:

H17. These various Reserves allow for the fact that we have assumed average investment returns to exceed inflation by 4% p.a. over the long-term and we have assumed average pension increases to equal average inflation over the long-term, although we note that such pension increases are not guaranteed as they are subject to affordability.

	Prior to New Reserves	Longevity Reserve Added	Both New Reserves Added
	N$ 000'S	**N$ 000'S**	**N$ 000'S**
Value of Assets	**29 940 849**	**29 940 849**	**29 940 849**
Value of Liabilities / Reserves:			
Active Members	13 666 532	13 666 532	13 666 532
Disability Income Recipients	173 540	173 540	173 540
Longevity Reserve	Zero	2 914 034	2 914 034
Employer Contribution Reserve	Zero	Zero	3 874 680
Pensioners	5 586 819	5 586 819	5 586 819
Data Reserve	971 345	971 345	971 345
AIDS Reserve	1 093 323	1 093 323	1 093 323
Total	**21 491 558**	**24 405 592**	**28 280 272**
Actuarial Surplus	**8 449 290**	**5 535 257**	**1 660 577**
Funding Level (Ratio of Assets to Liabilities)	**139.3 %**	**122.7 %**	**105.9 %**