Retirement

Government Employees Pension Fund

Statutory actuarial valuation as at 31 March 2024
GEPF/SV/45401

Prepared by Alexander Forbes Financial Services and
African Origins Actuarial Solutions

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EXECUTIVE SUMMARY

Introduction

1. This statutory actuarial valuation of the Government Employees Pension Fund *("GEPF")* was performed as at 31 March 2024. The previous statutory actuarial valuation was performed as at 31 March 2021.

Membership

2. The valuation of the fund was based on the membership data set out below. The corresponding statistics at the previous valuation date have been provided for comparison.

	31 March 2021		31 March 2024	
Active membership	**Number**	**Pensionable emoluments (R'm)**	**Number**	**Pensionable emoluments (R'm)**
Services	225 597	64 110	232 474	78 642
Other	1 044 847	311 311	1 031 526	363 788
Total	**1 270 444**	**375 422**	**1 264 000**	**442 430**
Pensioners	**Number**	**Annual pensions (R'm)**	**Number**	**Annual pensions (R'm)**
Retirees	315 397	48 492	352 805	69 671
Dependants	170 228	10 884	200 237	15 811
Subtotal	**485 625**	**59 376**	**553 042**	**85 482**
Deferred pensioners	8	0.17	7	0.16
Total	**485 633**	**59 376**	**553 049**	**85 482**

Financial position of the fund

3. The fund was in a sound financial condition as at 31 March 2024. The financial position as at the valuation date is summarised below. The corresponding statistics at the previous valuation date have been provided for comparison.

Financial position of the fund	31 March 2021 R'm	31 March 2024 R'm
Fair value of assets	**2 041 346**	**2 343 754**
Accrued service liabilities		
Active member liability	1 218 049	1 149 363
S-case and exits in progress liability	27 095	22 556
Pensioner liability	595 256	783 936
Deferred pensioner liability	0.6	0.4
Data reserve	9 135	8 620
Discriminatory practices reserve	4 983	5 046
Total accrued service liabilities	**1 854 519**	**1 969 521**
Balance of assets before contingency reserves	**186 827**	**374 233**
Funding level excluding contingency reserves	**110.1%**	**119.0%**
Contingency reserves		
Mortality improvement reserve	49 955	46 106
Pension increase reserve (past service)	242 750	242 734
Pension increase reserve (future service)	140 983	213 171
Solvency reserve	459 152	401 040
Total value of contingency reserves	**892 840**	**903 051**
Balance of assets after contingency reserves	**(706 013)**	**(528 818)**
Funding level including contingency reserves	**74.3%**	**81.6%**

4. The revised GEPF funding level policy adopted by the board of trustees defines the ***Funding level including contingency reserves*** as a funding level determined using solvency reserves and other contingency reserves which the trustees deem realistic in the long term (without undue margins of conservatism). The ***Funding level excluding contingency reserves*** is defined as a funding level determined on the accrued liabilities of the fund before considering any contingency reserves. The funding level policy requires the trustees to take steps to ensure that the funding level excluding contingency reserves is always above 100% and to strive to maintain a funding level including contingency reserves at or above 100%.

5. The funding level including contingency reserves was 81.6% at the valuation date, based on fully funded contingency reserves. At the previous valuation the funding level including contingency reserves was 74.3%. The revised GEPF funding level policy does not allow the inclusion of the contingency reserves to push the fund into a deficit, Therefore, the level of the contingency reserves will be restricted to what is affordable. At the valuation date, contingency reserves will therefore be restricted to 41.4% of the recommended level, and as such the funding level including contingency reserves is 100% at the valuation date.

6. The funding level excluding contingency reserves at the valuation date, would therefore exceed 100% at 119.0%. At the previous valuation the funding level excluding contingency reserves was 110.1%.

Future service contribution rates

7. In this valuation, contributing members are categorised as follows:

"Services", which relates to members of the South African National Defence Force (SANDF), South African Police Service (SAPS), Correctional Services (CS) and the State Security Agency (SSA).

"Other", which relates to members not employed by the above employers.

Recommended contribution rate by employer group

8. The recommended employer contribution rate required to meet the cost of benefits accruing after the valuation date is set out below. The corresponding statistics at the previous valuation date have been provided for comparison.

Employer contribution rates by employer group	% of pensionable emoluments			
	31 March 2021		31 March 2024	
	Services	Other	Services	Other
Funded benefits	24.5%	20.7%	19.3%	16.1%
Fund expenses	0.3%	0.3%	0.3%	0.3%
Less: Member contributions	(7.5%)	(7.5%)	(7.5%)	(7.5%)
Recommended employer contribution rate	**17.3%**	**13.5%**	**12.1%**	**8.9%**
Actual employer contribution rate	16.0%	13.0%	16.0%	13.0%
Excess / (shortfall)	**(1.3%)**	**(0.5%)**	**3.9%**	**4.1%**

Cost of additional pensionable service for Services members

9. We have also considered the effect on the contribution rate in respect of members of *Services* members, who qualify for a 25% enhancement to their years of pensionable service in excess of ten years. The results are shown in the table below:

	% of pensionable emoluments			
	31 March 2021		31 March 2024	
	Including 25%	Excluding 25%	Including 25%	Excluding 25%
Funded benefits	24.5%	20.9%	19.3%	16.4%
Fund expenses	0.3%	0.3%	0.3%	0.3%
Less: Member contributions	(7.5%)	(7.5%)	(7.5%)	(7.5%)
Recommended employer contribution rate	**17.3%**	**13.7%**	**12.1%**	**9.2%**
Actual employer contribution rate	16.0%	16.0%	16.0%	16.0%
Excess / (shortfall)	**(1.3%)**	**2.3%**	**3.9%**	**6.8%**

10. As indicated in the results above, the effect of the service enhancement in respect of *Services* members amounts to approximately 2.9% of pensionable emoluments. This is slightly lower than the difference in contributions payable by the *Services* employers (16%) and *Other* employers (13%) but highlights the appropriateness of the difference in contribution rate based on the benefit enhancement. The residual difference can be explained by the differing decrement assumptions between the two categories of members.

Additional 2% equity return allowance

11. For purposes of testing the appropriateness of the current level of contributions as at 31 March 2024, a 2% additional return on equity was considered. The use of this assumption for determining the future funding requirements must be seen as a risk budgeting exercise for the employer. To the extent that, over the long term, equities earn an additional 2% on the assumed best estimate equity return (and experience is as assumed), the required level of contributions at the rates below would be adequate. It should, however, be appreciated that the higher the assumed equity return, the lower will be the required contribution rates. This also carries a greater risk of requiring additional contributions in the future should experience not be in line with that assumed.

Contribution rates by employer group	31 March 2024 % of pensionable emoluments Services	 Other
Recommended employer contribution rate (as shown above)	**12.1%**	**8.9%**
Adjustment to required contribution rate	(3.0%)	(2.6%)
Recommended employer contribution rate (as adjusted)	**9.1%**	**6.3%**
Actual employer contribution rate	16.0%	13.0%
Excess / (shortfall)	**6.9%**	**6.7%**

12. Based on an additional 2% equity return assumption, the required contribution rate is 9.1% for *Services* employers and 6.3% for *Other* employers. On this basis, there is an excess contribution of 6.9% for *Services* employers and an excess contribution of 6.7% for *Other* employers.

13. We would suggest that the trustees and the employer not rely on the fund's assets earning this higher equity risk premium over the long term and that the required employer contribution rate should be considered in terms of the valuation basis.

Findings and recommendations

14. As at 31 March 2024 the assets of the fund were sufficient to cover the best estimate liabilities in full, with a funding level of 119.0%. The current position therefore meets the trustees' targeted funding level excluding contingency reserves of 100%.

15. The fund does not have sufficient assets to cover the recommended solvency reserve and other contingency reserves in full. Allowing for the full solvency reserve and other contingency reserves reflects the funding level including contingency reserves of 81.6%. An amount of R374 233 million is available to cover these reserves, which implies that 41.4% of the recommended reserves are funded.

16. An employer contribution rate of 12.1% and 8.9% of total pensionable emoluments is required respectively for *Services* and *Other* members to finance the benefits which are expected to accrue over the period between the current valuation date and the next valuation date (31 March 2026). These contribution rates are inclusive of the cost of death in service lump sum benefits, funeral benefits and the cost of administration expenses.

17. The employer currently contributes at a rate of 16% of total pensionable emoluments for *Services* members and 13% for *Other* members. For the purpose of testing the appropriateness of the current level of contributions, a 2% additional return on equity has been considered. On this basis, the required contribution rate is 9.1% for *Services* members and 6.3% for *Other* members, resulting in an excess contribution of 6.9% for *Services* members and 6.7% for *Other* members. This does, however, require an appreciation by the employer of the risks mentioned in paragraph 11 above, and we would recommend that this be communicated to the employer.

18. The cost of the service enhancement in respect of *Services* members amounts to approximately 2.9% of pensionable emoluments. This is slightly lower than the current difference in contributions paid in respect of *Services* and *Other* members but highlights the appropriateness of the difference in contribution rates.

19. The level of contributions should be monitored as part of each actuarial valuation of the fund to ensure that it is in line with the adopted funding level policy.

20. In line with rule 7.2 of the fund's rules, which states that the employer contributions should be sufficient to ensure that the fund is able to meet its obligations at all times, subject to a funding level excluding contingency reserves of 100%, the funding level policy adopted by the trustees requires the trustees to ensure that the funding level excluding contingency reserves is above 100%. This can therefore be viewed as the primary funding objective of the fund. The employer contribution rate must be determined by the employer in consultation with the trustees and the minister of finance, with due regard to the recommendations of the most recent actuarial valuation of the fund. The funding level policy also states that the trustees should strive to maintain the funding level including contingency reserves at a level of above 100%. The funding level including contingency reserves of the fund at the valuation date was 81.6% with a funding level excluding contingency reserves of 119.0%. As at the valuation date the fund meets the target for the funding level excluding contingency reserves, but as the contingency reserves are only partially funded, does not meet its long-term funding objectives.

21. For illustration purposes, we have approximated the additional contribution rates that would be required to eliminate the accrued shortfall in the recommended funding level including contingency reserves over periods of 10, 15 and 20 years as 12.0%, 8.0% and 6.0% of pensionable salaries, respectively. For simplicity, we assumed that the future investment return equals the future salary increase rate and that the membership will remain roughly stable. These additional funding rates are provided only to give perspective on the level of the accrued deficit and do not consider any strains that may arise in future.

22. We recommend that the current F(Z) and A(X) factors that are used to calculate actuarial interest, as well as the F(X) factors that are used in the purchase of service calculations, be reviewed after each statutory actuarial valuation of the fund. This will enable the trustees to determine whether the basis produces factors which are sufficiently different to warrant a change in the factors used by the fund, and to ensure that the total members' actuarial interest values are close to the valuation liabilities. These factors are attached in Appendix 8.

23. We recommend that the key demographic assumptions used for the fund be monitored through an experience analysis exercise every three to five years.

24. On the basis that the fund has met its funding objectives and that the current contributions are expected to cover the cost of future benefits with specific reference to the risks mentioned in paragraph 11 above as well as the fact that the contingency reserves are only 41.4% funded, we can confirm that the fund was in a sound financial condition as at 31 March 2024.

1. INTRODUCTION

I am pleased to present to the trustees of the Government Employees Pension Fund ("GEPF") this statutory actuarial valuation as at 31 March 2024 (*"the valuation date"*). This report sets out the results of the statutory valuation of the fund as at 31 March 2024 and includes an analysis of the financial progress of the fund since 31 March 2021 *("the previous valuation date")*. The period between the previous valuation date and the current valuation date is referred to hereinafter as the valuation period.

This report has been prepared in accordance with the Government Employees Pension Law, 1996 as amended ("the GEP Law"), which requires that the fund's financial condition be investigated and reported upon by a valuator at least once in every three years. The practice of the fund is to have statutory actuarial valuations performed biennially.

Registration and operation

1.1 The fund was established in 1973, changing its name to the Government Employees Pension Fund in 1996.

1.2 The fund operates on defined benefit principles. In terms of the rules of the fund, members contribute at a rate of 7.5% of pensionable emoluments, with the employer being responsible for the balance of the cost of providing fund benefits in terms of the rules. A summary of the fund benefits, contributions and expenses is set out in Appendix 1.

1.3 The previous statutory valuation was carried out by Alexander Forbes Financial Services and African Origins Actuarial Origins as at 31 March 2021. At that date, the fund reflected a funding level excluding contingency reserves (assets divided by liabilities – excluding solvency reserves and contingency reserves) of 110.1%, which exceeded the trustees' targeted funding level excluding contingency reserves of 100%. The funding level including contingency reserves (assets divided by liabilities including recommended solvency reserves and contingency reserves) was 74.3%, which was below the trustees' targeted funding level including contingency reserves of 100%.

1.4 The purpose of this valuation is to investigate the financial soundness of the fund in terms of the funding objectives of the fund's funding level policy.

1.5 For the purposes of this valuation, contributing members are categorised as follows:

"Services", which relates to members of the South African National Defence Force (SANDF), South African Police Service (SAPS), Correctional Services (CS) and the South African Secret Service (SASS)

"Other", which relates to members not employed by the above members.

Objectives

1.6 The purpose of the valuation is therefore:

- to determine whether the existing assets of the fund are sufficient to cover the fund's liabilities accrued to the valuation date;
- to determine whether the funding level meets the minimum funding requirement as outlined in rule 7.2 of the fund's rules and the requirements of the funding level policy adopted by the fund;
- to investigate and report on the actual experience of the fund since the previous valuation;
- to review the assumptions used considering actual experience and industry developments;
- to recommend an employer contribution rate to meet the cost of benefits accruing in the future;
- to assess the necessity for, and quantum of, any contingency reserves; and
- to perform the basis for consideration by the trustees of the pension increases to be granted to pensions in payment over the period to the next valuation.

Valuation data

1.7 In compiling this report, we have relied upon the accuracy and completeness of information made available to us by the administrators, the Government Pensions Administration Agency *("GPAA" / "the administrator")*, and external parties. Except where expressly stated in the report, we have not independently verified the accuracy of the facts, or the basis of the information supplied to us.

1.8 The results of the statutory valuation depend on the accuracy of:

- the membership data;
- the information on the assets, as supplied by the relevant sources; and
- the audited financial statements for the valuation period.

Reasonableness checks have been performed on the above and we are satisfied with the general accuracy and completeness of the data provided and with its suitability for purposes of this statutory valuation. Further information regarding the reasonableness checks performed is set out in Appendix 2.

1.9 The trustees and the employer must ensure that any significant fund events (e.g. large-scale retrenchments or large salary adjustments, or change in the fund's investment strategy) which occurred during the valuation period as well as thereafter have been reported to the actuary, to ensure that the financial impact of such events on the fund is taken into account in determining the fund's position at the valuation date.

Capacity, brief and professional guidance

1.10 This report has been prepared by Alexander Forbes Financial Services (Pty) Ltd *("Alexander Forbes")* and African Origins Actuarial Solutions *("African Origins")* in accordance with the instructions of the fund's trustees. This report has been prepared solely for the benefit of the trustees of the fund in my capacity as the valuator to the fund and as a director of African Origins. The information contained in this report and in all documents referred to in this report is confidential.

1.11 Our investigations have been undertaken to comply with the requirements of rule 4.9 of the fund, as well as section 16 of the Pension Funds Act, and are in accordance with the requirements of the Financial Sector Conduct Authority (*"FSCA"*). The report has been prepared in accordance with Standard of Actuarial Practice (*"SAP")* 201 issued by the Actuarial Society of South Africa *("ASSA")*, and, where relevant, the guidance provided by the Pension Fund ("*PF*") Circulars published by the FSCA has been considered.

1.12 Throughout this report any values that have been determined are, except where otherwise stated, in accordance with our view of the most probable future experience. Our specific assumptions and other reliances and limitations are documented in the following sections and supporting appendices. These sections and appendices are an integral part of this report.

1.13 African Origins and Alexander Forbes do not accept any liability to any persons, other than the trustees, in connection with this report or its related enquiries. We accept no liability in respect of any matter outside the scope and limitations of this report and purpose for which it is prepared.

1.14 This report may not be disclosed and / or relied upon in whole or in part to / by any person other than the trustees or quoted in any other context without prior written consent. Any person, other than the trustees to whom this report is addressed, who receives a draft or copy of this report (or any part of it) or discusses it (or any part of it) or any related matter with me or any third party, does so on the basis that they acknowledge the source of this report and accept that they may not rely on it for any purpose whatsoever and that we owe a duty of care only to the trustees. Any portion of this report, if reproduced or transmitted, must include a reference to the full report and to this clause.

1.15 This report has been prepared as at 31 March 2024 and covers the valuation period given above. Unless specifically stated to the contrary, it does not consider any events after the valuation date.

1.16 This report has been peer reviewed by an approved valuator.

2. DEVELOPMENTS SINCE THE PREVIOUS VALUATION DATE

Rules and amendments

2.1 A rule amendment, effective 5 July 2023, was gazetted (Financial Matters Amendment Act No 9 of 2023, Government Gazette 48917). This rule amendment conforms the definition of responsible Minister with other institutional Acts and deals with other governance related matters.

2.2 No financially significant rule changes were made during the valuation period.

Pension increases

2.3 The pension increases granted to pensioners during the valuation period were as follows:

Date of increase	Increase	CPI (for the year ended 30 November)	Increase as % of CPI
1 April 2021	3.20%	3.20%	100.0%
1 April 2022	5.50%	5.50%	100.0%
1 April 2023	5.55%	7.40%	75.0%
1 April 2024	6.00%	5.50%	109.1%

2.4 Proportionate increases were granted to pensions in payment that had been in payment for less than twelve months at the time that an increase was granted. The pension increases detailed above have been considered in the valuation of the liabilities of the fund as at 31 March 2024.

Salary increases

2.5 The table below sets out the salary adjustments over the valuation period:

Date of increase	Increase
1 April 2022	3.0%
1 April 2023	7.5%
1 April 2024	4.7%

2.6 The PSCBC resolution 1 of 2021 specified salary adjustments as follows:

- a monthly non-pensionable cash allowance, depending on salary level, from 1 April 2021 to 31 March 2022 shall remain in force for the 2022/2023 salary adjustment; and
- a biennial pay progression of 3% shall apply to those employees who qualify in terms of the Sectoral agreements, however if an employee is eligible for 3% in 2022 and would have received the 1.5% adjustment in 2021, the remainder of the 1.5% be implemented in 2022.

2.7 The PSCBC resolution 2 of 2023 specified salary adjustments as follows:

- An average increase of 7.5% for all employees on salary levels 1 – 12, distributed as a translation of the non-pensionable cash allowance into a pensionable salary, estimated at an average of 4.2%, plus an additional 3.3% pensionable salary increase; and.
- An increase to all employees on salary levels 1 – 12 of the projected CPI for the financial year 2024/2025, capped between 4.5% and 6.5%.

2.8 The salary increases above were considered in the valuation of the liabilities of the fund as at 31 March 2024.

Contributions

2.9 The contributions paid by the members and employer during the valuation period were as follows:

Contribution rates	% of pensionable emoluments
Member contributions	7.50%
Employer contributions	
Services	16.0%
Other	13.0%

The recommended employer contribution rate at the previous valuation date was 17.3% of pensionable emoluments for *Services* members and 13.5% for *Other* members.

Administration and actuarial services

2.10 The fund was administered by the Government Pensions Administration Agency during the valuation period.

2.11 Sandile Mbili has been the valuator to the fund with effect from 1 April 2020 following a resolution of the board of trustees.

Demographic assumptions

2.12 An investigation into the demographic experience of the fund was completed in 2024, carried out over the period 1 April 2012 to 31 March 2023. The full details of the investigation are set out in the report finalised in February 2024: "Government Employees Pension Fund Demographic Investigation for the period 1 April 2012 – 31 March 2023". The board adopted the recommended new assumptions on 26 June 2024.

3. BENEFIT STRUCTURE

Active members

3.1 A summary of the current benefit structure, in terms of the registered rules of the fund, is included in Appendix 1.

Pensioners: pension increase policy

3.2 The trustees have adopted a formal pension increase policy to give effect to section 25 of the GEP Law and GEPF rule 23, to establish the pension increase that is affordable and to guide the trustees in their determination of the annual pension increase. According to rule 23, the fund aims to grant minimum pension increases, if affordable, of 75% of inflation subject to a minimum pension of the original pension increased with 75% of full inflation.

3.3 The GEPF Pension Increase Policy effective from 1 April 2013 states that in making their pension increase recommendation:

"8.2.1.1 The B&A Committee will recommend an inflation related increase, comprising of the Basic Increase and, possibly, a Further Inflation Related Increase. In considering the Further Inflation Related Increase, the B&A Committee may take account of the National Treasury's forward estimate of inflation, or anticipated general increases in public service salaries, or increases in social grants, as well as the balance in the Notional Pensioner Account.

8.2.1.2 If the full Basic Increase cannot be granted because of the affordability provision in 10 below, a proportionate share will be granted.

8.2.1.3 The B&A Committee may recommend one or more of a Catch-up Increase and a Supplementary Increase, in addition to the inflation related increase in 8.2.1.1"

3.4 In addition, the pension increase policy states that the trustees may approve a pension increase recommendation provided that, after the recommended increase, the fund's funding level is higher than the minimum funding level, or where the employer has committed to paying such amounts as will increase the funding level to the minimum funding level, after the recommended increase, within the next three years.

3.5 To allow the trustees greater discretion in granting pension increases of 100% of CPI at times when they may not be affordable and not to create the unreasonable expectation that pension increases will always be 100% of CPI, an additional reserve has been established.

4. MEMBER DATA

The valuation of the fund at 31 March 2024 was based on the membership detailed below. Further statistics, including a reconciliation of the current membership with that present at the previous valuation date, are provided in Appendix 2. The trustees should verify that the statistics correspond with the actual membership of the fund.

Contributing members

4.1 Membership statistics in respect of active members at the valuation date are provided in the table below (the corresponding statistics at the previous valuation date have been provided for comparison):

	31 March 2021	31 March 2024	Change
Services			
Number of members	225 597	232 474	6 877
Salary-weighted average age	43.7 years	44.3 years	0.6 years
Salary-weighted average past service	18.3 years	18.4 years	0.1 years
Total pensionable emoluments (R'm)	64 110	78 642	22.7%
Average pensionable emoluments (R)	284 181	338 281	19.0%
Other			
Number of members	1 044 847	1 031 526	(13 321)
Salary-weighted average age	46.4 years	46.7 years	0.3 years
Salary-weighted average past service	15.1 years	15.0 years	(0.1 years)
Total pensionable emoluments (R'm)	311 311	363 788	16.9%
Average pensionable emoluments (R)	297 949	352 670	18.4%
Total			
Number of members	**1 270 444**	**1 264 000**	**(6 444)**
Salary-weighted average age	**46.0 years**	**46.3 years**	**0.3 years**
Salary-weighted average past service	**15.7 years**	**15.6 years**	**(0.1 years)**
Total pensionable emoluments (R'm)	**375 422**	**442 430**	**17.8%**
Average pensionable emoluments (R)	**295 504**	**350 024**	**18.4%**

4.2 The number of active members has decreased from 1 270 444 to 1 264 000 over the valuation period. At the same time there was an increase in the salary weighted average age of the fund's membership from 46.0 years to 46.3 years.

4.3 During the valuation period, the pensionable emoluments of members who contributed to the fund throughout the valuation period increased by an average of 7.6% per annum. The actual salary increases for members present at both the current and the previous valuation dates was lower than that assumed at the previous valuation date, i.e. 10.2% per annum plus age-related merit increases (or 12.6% per annum on average for members present at both valuation dates).

Pensioners

4.4 Details of the active and suspended pensioners and annual pension statistics at the valuation date are provided in the table below (the corresponding statistics at the previous valuation date have been provided for comparison):

Group	31 March 2021	31 March 2024	Change
Retirees			
Number	315 397	352 805	37 408
Pension-weighted average age	67.9 years	68.1 years	0.2 years
Total annual pensions (R'm)	48 492	69 671	43.7%
Average annual pension (R)	153 749	197 476	28.4%
Spouses			
Number	162 916	175 790	12 874
Pension-weighted average age	64.3 years	64.8 years	0.5 years
Total annual pensions (R'm)	10 580	13 857	31.0%
Average annual pension (R)	64 941	78 827	21.4%
Child pensioners			
Number	7 312	24 447	17 135
Pension-weighted average age	15.3 years	14.7 years	(0.6 years)
Total annual pensions (R'm)	304	1 954	542.7%
Average annual pension (R)	41 575	79 916	92.2%
Total			
Number	**485 625**	**553 042**	**67 417**
Pension-weighted average age	**66.6 years**	**66.9 years**	**0.3 years**
Total annual pensions (R'm)	**59 376**	**85 842**	**44.0%**
Average annual pension (R)	**122 267**	**154 566**	**26.4%**

The pensioner statistics above exclude 48 400 pensioners and dependants at 31 March 2024 (and 33 487 at 31 March 2021) that were inferred from retirements and deaths in the valuation data, but for whom no individual data were provided. Of the 48 400 such cases at 31 March 2024, 14 122 were reflected as retirements or dependants of members who died in service and 34 278 were reflected as dependants of pensioners who died. Of the 33 487 such cases at 31 March 2021, 2 467 were reflected as retirements or dependants of members who died in service and 31 011 were reflected as dependants of pensioners who died.

4.5 At 31 March 2024 there were 553 042 pensioners with total annual pensions (including increases up to 1 April 2024) of R85 842 million per annum.

4.6 During the valuation period, annual pensions increased by an average of 5.7% per annum. This is lower than the long-term average rate of increase in annual pensions assumed at the previous valuation date, i.e. 7.4% per annum.

4.7 The pension-weighted average age of the group (excluding child pensions) increased from 67.0 to 67.5 years.

Deferred pensioners

4.8 Details of the deferred pensioners and annual deferred pension statistics at the valuation date are provided in the table below (the corresponding statistics at the previous valuation date have been provided for comparison):

	31 March 2021	31 March 2024	Change
Number	8	7	(1)
Total annual pensionable emoluments (R'000)	170	158	(7.1%)
Average annual pensionable emoluments (R)	21 250	22 571	4.9%

5. ASSETS

Details of the fund's investments and cash flows over the valuation period were provided as part of the financial statements.

Asset classes

5.1 The table below shows the breakdown of the fund's invested assets by asset class at the valuation date (corresponding values from the previous valuation of the fund have been provided for comparison):

Asset class	31 March 2021		31 March 2024	
	Market value R'm	Proportion	Market value R'm	Proportion
Local equities	1 148 655	55.9%	1 217 248	52.4%
Local property	14 977	0.7%	16 181	0.7%
Local fixed interest	644 388	31.3%	698 663	30.0%
Money market	8 521	0.4%	32 297	1.4%
Loans	49 772	2.4%	40 865	1.8%
Equipment	8	0.0%	3	0.0%
Collective investment schemes	842	0.0%	1 071	0.0%
Foreign investments	192 120	9.3%	319 374	13.7%
Total investments	**2 059 282**	**100.0%**	**2 325 702**	**100.0%**

Adjustments

5.2 Certain adjustments must be made to the fund's asset values to take account of outstanding debtors and creditors as well as cash on hand at the valuation date. These adjustments as extracted from the fund's audited financial statements as at the valuation date, are as follows. Corresponding values from the previous valuation of the fund have been provided for comparison.

	31 March 2021 R'm	31 March 2024 R'm
Total investments	**2 059 282**	**2 325 702**
Cash at bank	**33 974**	56 722
Sundry debtors:		
Accounts receivable	6 745	12 542
Contributions receivable	3 721	1 148
Funding loan	7	0
Transfers receivable	1	0
Sundry creditors:		
Accounts payable	(4 680)	(6 645)
Benefits payable	(55 888)	(43 831)
Transfers payable	(1)	(1)
Provisions	(12)	(22)
Unclaimed benefits	(1 802)	(1 861)
Total assets after adjustments	**2 041 346**	**2 343 754**

5.3 A revenue and expenditure account (at market value), for the period 1 April 2021 to 31 March 2024, is shown in Appendix 3.

Valuation of assets

5.4 For purposes of this statutory actuarial valuation, the assets have been taken into account at 100% of fair (or market) value and no investment margin has been set aside. Therefore, the assets of the fund have been considered at R 2 343 754 million as at the valuation date. This is consistent with the valuation methodology applied to the valuation of the fund's liabilities.

Fund returns

5.5 The investment return earned on the fund's assets is approximated by the change in the Notional Portfolio Index *("NPI")*. The NPI is calculated monthly and is based on the estimated returns earned by the fund, as provided by the fund's asset consultants. The return in each financial year is rebased to reflect the returns approximated by the market values and cash flows reflected in the annual financial statements. This investment return (net of investment manager fees) earned over the valuation period is set out in the table below.

5.6 We have estimated the net annualised money-weighted yields earned on the overall fund for the valuation period, as follows:

Financial year	Net return
1 April 2021 to 31 March 2022	12.71%
1 April 2022 to 31 March 2023	3.72%
1 April 2023 to 31 March 2024	5.84%
1 April 2021 to 31 March 2024 Annualised	**7.35%**

5.7 The yield of 7.35% per annum should be considered in the context of the long-term expected return of 14.4% per annum assumed in the previous statutory valuation report.

Investment strategy

5.8 The trustees of the fund in consultation with the employers are responsible for the investment of the fund's assets and need to ensure that the investment strategy of the fund remains appropriate given the nature of the fund's liabilities. In respect of occupational funds, Board Notice 149 of 2010 issued by the FSCA requires the actuary to the fund to comment on the appropriateness of the fund's asset strategy relative to its liabilities as part of the valuation report.

5.9 In this regard it should be noted that the fund's entire investment portfolio is managed on a market-linked basis, which means that the returns are expected to be volatile and there may be negative returns for some periods. The fund's assets are invested in a mixture of asset classes, including South African equities, bonds, property, and cash and international assets.

5.10 A high proportion of these assets is invested in equities and property. These are 'real' assets in the sense that over the long term they are expected to deliver an investment return above (and linked to) the rate of price inflation. This asset class provides a reasonable match to the fund's liabilities which are closely linked to future salary and pension inflation which in turn are linked to price inflation.

5.11 Other factors that the trustees and the employers should consider include:

- The employer 'underwrites' the fund in the sense that the employer would be obliged to pay a higher rate of contributions or lump sum amounts to the fund if it was under funded, to the extent that it is unable to meet its ongoing benefit obligations.

- If the fund continues in its current form, its liabilities are long term, in that benefits are not paid out to members until the point at which they retire, die or leave. It is therefore appropriate also to adopt a long-term view about the fund's investment strategy. On this basis it is reasonable to invest a significant proportion of the fund's assets in equities, which are generally expected to deliver a higher long-term investment return than the other asset classes in which the fund invests.

- Following from the above point, and whilst the funding level is currently above the minimum funding level, the fund is not able to set aside the full recommended solvency reserve and contingency reserves to protect the fund in the case of adverse investment performance, improvements in pensioner mortality and other contingencies.

- A feature of equity investment is that the capital value of the investments can be volatile in the short term. A consequence of the fund's investment strategy is that there may be times when there are significant falls in the fund's value of assets. The amount allocated to the solvency reserve (had it been fully funded) would provide a margin to protect the fund against such volatility, but given the level of funding of that reserve, may not be sufficient.

- The fund does not have a separate and specific asset strategy in place for the assets backing pensioner liabilities. Typically, such a strategy would involve a higher exposure to South African bonds (including inflation-linked bonds), and a reduction in equity exposure, compared to the current strategy. It is our understanding that the investment strategy adopted for the overall fund assets has been based on a weighted average of the investment strategy applicable to in-service members and to pensioners.

- The fund holds a lower percentage of foreign assets than might otherwise be suggested purely in terms of the risk diversification of assets and exposure to industries not available in the local context.

- The trustees and the employers should continue to consider the appropriateness of the assets in the light of the nature of the fund, the employer covenant, the current funding level, the desired level of future pension increases and the required and affordable contribution rates by the employers.

- Taking the above factors into account, the current asset strategy of the fund remains reasonable as at the valuation date in relation to the liability profile of the fund. The strategy, however, does imply that the fund ideally needs to hold reasonable investment risk contingency reserves (solvency reserves) in order to have an acceptable probability of being able to meet the reasonable benefit expectations of in-service members and pensioners without calling on the employers to fund the effect of any volatility in the level of the assets.

- As such we are satisfied with the structure of the assets backing these liabilities and that the matching of the assets with these liabilities is, in our opinion, adequate.

6. VALUATION METHOD AND BASIS

6.1 This statutory actuarial valuation has been conducted on the basis of the benefits, contributions and other provisions of the rules as they stood at the valuation date. These are summarised in Appendix 1.

6.2 An appropriate method and basis need to be chosen to value the liabilities of the fund. These should be consistent with the objectives of the valuation, as outlined in section 1.

6.3 In the previous valuation the expected return from equities for the next 20 years was based on expected inflation plus a real return of 5.3%. Alexander Forbes uses an approach to setting expected equity returns based on more direct methods rather than assuming a strong link between equity and bond returns. As the fund has now introduced global developed market and emerging market equities, it is also necessary to include expected returns for these markets. Annual real returns of 6.8% (5.3%) on local equities, 6.7% on global developed market equities, and 7.8% on emerging market equities were assumed to cater for the change in the fund's strategic asset allocation, with the assumption as at 31 March 2021 in brackets. The asset allocation was changed for purposes of setting the assumption for expected future returns from the previous 40% domestic bond and 60% domestic equity allocation to the following, based on the fund's latest strategic asset allocation:

Domestic bonds	40%
Domestic equities	42%
Developed market equities	10%
Emerging market equities	8%

On this basis, the gross pre-retirement discount rate is 15.7% per annum using a combined duration for active members and pensioners of 15.03 years. This valuation has therefore been undertaken on a best estimate basis, together with an explicit provision for a solvency reserve.

6.4 We have used the **projected unit** method to value the expected liabilities of the fund. This method separates the benefits accrued to the valuation date (the past service liabilities) from those expected to accrue in future (the future service liabilities). Allowance is made for expected salary and pension increases and for interest accrual to the member's anticipated date of withdrawal, death or retirement. This is discussed in more detail in Appendix 4.

6.5 A summary of assumptions for the valuation of the liabilities is provided in the table below (the corresponding assumptions at the previous valuation date have been provided for comparison).

6.6 It should be noted that actual experience is likely to differ from the assumptions below. The actual cost of benefit provision will ultimately depend on the actual financial and demographic experience of the fund.

BEST ESTIMATE	31 March 2021	31 March 2024
Financial assumptions		
Long term discount rate	14.4%	15.7%
Inflation	9.2%	9.3%
Salary inflation (before merit scale)	10.2%	10.3%
Net pre-retirement discount rate	3.72%	4.91%
Affordable pension increases	7.4%	7.5%
Net-post retirement discount rate	6.42%	7.71%
Demographic assumptions		
Mortality		
- Pre-retirement	refer to Appendix 4	refer to Appendix 4
- Post-retirement	refer to Appendix 4	refer to Appendix 4
Withdrawal	no allowance	no allowance
Ill-health	refer to Appendix 4	refer to Appendix 4
Spouse's age difference	Male spouse 4 years older than female spouse	Male spouse 4 years older than female spouse
Percentage married	refer to Appendix 4	refer to Appendix 4

SOVENCY RESERVE (Discontinuance basis)	31 March 2021	31 March 2024
Financial assumptions		
Long term discount rate	13.7%	14.7%
Inflation	9.7%	10.0%
Salary inflation	10.7% plus merit salary scale	11.0% plus merit salary scale
Net pre-retirement discount rate	2.71%	3.33%
Affordable pension increases	7.8%	8.0%
Net-post retirement discount rate	5.47%	6.20%

7. VALUATION RESULTS

7.1 To determine the level of solvency of the fund, it is necessary to compare the total assets of the fund with the total liabilities. The fund is solvent when the value of the assets is equal to or greater than the value of the liabilities, i.e. a funding level of 100% or greater. The funding level is the ratio of the value of the assets to the value of the liabilities of the fund at the valuation date.

7.2 The results of the statutory valuation of the fund as at 31 March 2024 are detailed in the table below. Corresponding values from the previous valuation of the fund have been provided for comparison.

Financial position of the fund	31 March 2021 R'm	31 March 2024 R'm
Fair value of assets	**2 041 346**	**2 343 754**
Accrued service liabilities		
Active member liability	**1 218 049**	**1 149 363**
Retirement	1 071 372	1 016 968
Death in service	103 796	98 817
Ill-health	42 881	33 578
S-case and exits in progress liability	**27 095**	**22 556**
Pensioner liability	**595 256**	**783 936**
Male pensioners	219 262	282 349
Female pensioners	249 332	331 493
Widowers	12 379	15 836
Widows	84 270	99 268
Male child pensioners	712	2 599
Female child pensioners	750	2 654
Late pensioner adjustment*	28 551	49 737
Deferred pensioner liability	0.6	0.4
Data reserve	9 135	8 620
Discriminatory practices reserve	4 983	5 046
Total accrued service liabilities	**1 854 519**	**1 969 521**
Balance of assets before contingency reserves	**186 827**	**374 233**
Funding level excluding contingency reserves	**110.1%**	**119.0%**
Contingency reserves		
Mortality improvement reserve	49 955	46 106
Pension increase reserve (past service)	242 750	242 734
Pension increase reserve (future service)	140 983	213 171
Solvency reserve	459 152	401 040
Total value of contingency reserves	**892 840**	**903 051**
Balance of assets after contingency reserves	**(706 013)**	**(528 818)**
Funding level including contingency reserves	**74.3%**	**81.6%**

**The Late Pensioner Adjustment allows for a delay in setting up pensioner records in respect of retired members and dependants of deceased members or pensioners.*

7.3 The above results (i.e. in respect of service up to 31 March 2024 and allowing for future salary increments in the case of contributors and future pension increases in respect of prospective and incumbent pensioners) reflect an accrued surplus of R374 233 million on the best estimate valuation basis, before any contingency reserves. This corresponds to a funding level excluding contingency reserves of 119.0%, which meets the trustees' ***targeted funding level excluding contingency reserves of at least 100%.*** At the previous valuation the funding level excluding contingency reserves was 110.1%.

7.4 The funding level including contingency reserves (i.e. the funding level after allowing for solvency reserves and other contingency reserves) is 81.6% at the valuation date. This is below the trustees' ***targeted funding level including contingency reserves of 100%***. The fund can therefore only afford to hold R374 233 million, or 41.4%, of the full recommended solvency reserves and contingency reserves of R903 051 million. At the previous valuation the funding level including contingency reserves was 74.3%.

7.5 For illustration purposes, we have approximated the additional contribution rates that would be required to eliminate the accrued shortfall in the funding level including contingency reserves over periods of 10, 15 and 20 years as 12.0%, 8.0% and 6.0% of pensionable salaries, respectively. For simplicity, we assumed that the future investment return equals the future salary increase rate and that the membership will remain roughly stable. These additional funding rates are provided only to give perspective on the level of the accrued deficit and do not consider any strains that may arise in future.

Analysis of change in financial position

7.6 To assist in understanding the financial impact that various items have had on the fund, we have prepared an analysis of the change in the fund's financial position (Appendix 5). This analysis investigates the extent to which actual experience has diverged from that assumed in the previous valuation basis.

Reserve accounts

7.7 The reserve accounts are discussed in more detail in Appendix 6.

Comment in terms of Advisory Practice Note (*"APN"*) 205

7.8 Whilst the value of the liabilities is based on best estimate assumptions, where relevant, and the solvency and other contingency reserves established by the trustees on our advice allow for some fluctuations in asset values and / or unexpected changes in liabilities, there is no guarantee that these reserves will prove sufficient in practice. Conversely, it is possible that the reserves may prove to be more than sufficient.

7.9 If the reserves prove to be insufficient, management action will be required to rectify the position. This may involve, inter alia, the reduction in future benefit accruals, an increase in the required contribution rate or, in the event of liquidation of the fund, the possibility of a debt to the employer. If the reserves prove to be excessive then the balance of assets would have been understated. The uncertainty of the adequacy or otherwise of the reserves held is unavoidable and the actual outcome can only be determined when the fund ceases to have any further liabilities.

8. FUTURE SERVICE CONTRIBUTION RATE

Employer contribution rate during the valuation period

8.1 The recommended employer contribution rate to meet the balance of the cost of benefits accruing after 31 March 2021 (as per the previous statutory valuation), was 17.3% of pensionable emoluments for *Services* members and 13.5% for *Other* members.

8.2 The employer contributed at 16% of pensionable emoluments for *Services* members and 13% for *Other* members during the valuation period.

Recommended employer contribution rate for future service benefits as at the valuation date

8.3 The recommended employer contribution rate for benefits accruing after 31 March 2024, without having regard to the funding level of the fund, calculated on the best estimate valuation basis, is set out below. The corresponding statistics at the previous valuation date have been provided for comparison.

Employer contribution rates by employer group	% of pensionable emoluments			
	31 March 2021		31 March 2024	
	Services	Other	Services	Other
Funded benefits				
Retirement benefits	19.4%	17.4%	15.9%	13.4%
Death benefits	2.9%	2.2%	2.1%	1.9%
Ill health benefits	1.6%	0.7%	1.0%	0.5%
Mortality improvement	0.5%	0.5%	0.3%	0.3%
Total funded benefits	**24.5%**	**20.7%**	**19.3%**	**16.1%**
Fund expenses	0.3%	0.3%	0.3%	0.3%
Less: Member contributions	(7.5%)	(7.5%)	(7.5%)	(7.5%)
Recommended employer contribution rate	**17.3%**	**13.5%**	**12.1%**	**8.9%**
Current employer contribution rate	16.0%	13.0%	16.0%	13.0%

8.4 The required contribution rate has decreased mainly due to the higher pre- and post-retirement discount rates caused by the increase in market interest rates, the increased exposure to equities, and the higher real returns expected on equities.

8.5 In our opinion, considering the size of the fund, the current self-insurance arrangements with respect to the death and disability benefits are appropriate. It should be noted, however, that the cost of risk benefits could increase even if the age, sex and salary profile remain stable, due to for instance the impact of unexpected pandemics.

Cost of additional pensionable service for *Services* members

8.6 We have also considered the effect on the contribution rate in respect of members of *Services* members, who qualify for a 25% enhancement to their years of pensionable service in excess of ten years. The results are shown in the table below:

	% of pensionable emoluments	
	Including 25%	**Excluding 25%**
Funded benefits	**19.3%**	**16.4%**
Retirement benefits	15.9%	13.4%
Death benefits	2.1%	1.8%
Ill-health benefits	1.0%	0.9%
Mortality improvement	0.3%	0.3%
Fund expenses	0.3%	0.3%
Less: Member contributions	(7.5%)	(7.5%)
Recommended employer contribution rate	**12.1%**	**9.2%**
Actual employer contribution rate	16.0%	16.0%
Excess / (shortfall)	**3.9%**	**6.8%**

8.7 As indicated in the results above, the effect of the service enhancement in respect of *Services* members amounts to approximately 2.9% of pensionable emoluments. This is slightly lower than the difference in contributions payable by the *Services* employers (16%) and *Other* employers (13%) but highlights the appropriateness of the difference in contribution rate based on the benefit enhancement. The residual difference can be explained by the differing decrement assumptions between the two categories of members.

Findings and Recommendations

8.8 For a fund governed in terms of the Pension Funds Act, the employer is required to contribute at the required rate determined by the valuator of the fund, or for any contribution shortfall to be funded from an employer surplus account in the fund.

8.9 The nature of the Government Employees Pension Fund is somewhat different in that it is governed in terms of the GEP Law, and the covenant of the employer is much stronger in terms of being able to meet any funding shortfall in the future.

8.10 The trustees and the employer need to jointly determine the pace of funding, i.e. the employer contribution rate, and an acceptable level of funding, both in the short term and the long term for the fund.

8.11 It should be noted that the excess of the current employer contribution rate (an average of 13.5% of pensionable salaries) over the required employer contribution rate (an average of 9.4% of pensionable salaries) amounts to some R18.1 billion per annum or some 0.92% of the fund's liabilities.

8.12 If the employer continues to contribute at the current rate, the excess is expected to increase the funding level by 0.92% per annum. This would result in a projected funding level of 119.9%, 120.8% and 121.8% over the next 1, 2 and 3 years respectively. However, this assumes that market conditions remain unchanged from those at the valuation date. We do not recommend that the fund or employer depend on this scenario, but it would be a good reason to maintain the current employer contribution rates.

Additional 2% equity return allowance

8.13 For purposes of testing the appropriateness of the current level of contributions as at 31 March 2024, a 2% additional return on equity was considered. The use of this assumption for determining the future funding requirements must be seen as a risk budgeting exercise for the employer. To the extent that, over the long term, equities earn an additional 2% on the assumed best estimate equity return (and experience is as assumed), the required level of contributions at the rates below would be adequate. It should, however, be appreciated that the higher the assumed equity return, the lower will be the required contribution rates. This also carries a greater risk of requiring additional contributions in the future should experience not be in line with that assumed.

Contribution rates by employer group	31 March 2024 % of pensionable emoluments	
	Services	Other
Recommended employer contribution rate (as shown above)	**12.1%**	**8.9%**
Adjustment to required contribution rate	(3.0%)	(2.6%)
Recommended employer contribution rate (as adjusted)	**9.1%**	**6.3%**
Actual employer contribution rate	16.0%	13.0%
Excess / (shortfall)	**6.9%**	**6.7%**

8.14 Based on the additional 2% return on equity assumption the required contribution rate is 9.1% for *Services* members and 6.3% for *Other* members. On this basis there is an excess contribution of 6.9% for *Services* members and an excess contribution of 6.7% for *Other* members. This does, however, require an appreciation by the employer of the associated risks mentioned above, and we would recommend that this is communicated to the employer. The excess contributions can also be applied to increase the level of funding of the contingency reserves.

8.15 We would suggest that the trustees and the employer should not rely on the fund's assets earning this higher equity risk premium over the long-term and that the required employer contribution rate should be considered in terms of the valuation basis.

9. SUMMARY AND RECOMMENDATIONS

Summary

9.1 The statutory actuarial valuation of the fund as at the valuation date was based on 1 264 000 active members with pensionable emoluments totalling R442 430 million, 553 042 pensioners with annual pensions totalling R85 482 million, and 7 deferred pensioners.

9.2 The adjusted value of the fund's available assets at 31 March 2024 was R2 343 754 million and the fund's accrued liabilities were R1 969 521 million on the best estimate basis.

9.3 The valuation thus disclosed excess assets of R374 233 million and an accrued funding level excluding contingency reserves of 119.0% on the best estimate valuation basis as at 31 March 2024. The fund is accordingly financially sound on the funding level excluding contingency reserves basis at the valuation date.

Findings and recommendations

9.4 As at 31 March 2024 the assets of the fund were sufficient to cover the best estimate liabilities in full, with a funding level excluding contingency reserves of 119.0%. The current position therefore meets the trustees' targeted funding level excluding contingency reserves of 100%.

9.5 The fund does not have sufficient assets to cover the recommended solvency reserve and other contingency reserves in full. Allowing for the full solvency reserve and other contingency reserves reflects a funding level including contingency reserves of 81.6%. An amount of R374 233 million is available to cover these reserves, which implies that 41.4% of the recommended reserves are funded.

9.6 Employer contribution rates of 12.1% and 8.9% of total pensionable emoluments are required respectively for *Services* and *Other* members to finance the benefits which are expected to accrue over the period between the current valuation date and the next valuation date (31 March 2026). These contribution rates are inclusive of the cost of death in service lump sum benefits, funeral benefits and the cost of administration expenses.

9.7 For illustration purposes, we have approximated the additional contribution rates that would be required to eliminate the accrued shortfall in the funding level including contingency reserves over periods of 10, 15 and 20 years as 12.0%, 8.0% and 6.0% of pensionable salaries, respectively.

9.8 The employer currently contributes at a rate of 16% of total pensionable emoluments for *Services* members and 13% for *Other* members. For the purpose of testing the appropriateness of the current level of contributions, a 2% additional equity return has been considered. On this basis, the required contribution rate is 9.1% for *Services* members and 6.3% for *Other* members, resulting in an excess contribution of 6.9% for *Services* members and 6.7% for *Other* members. This does, however, require an appreciation by the employer of the risks mentioned in paragraph 8.13 above, and we would recommend that these risks be communicated to the employer.

9.9 The cost of the service enhancement in respect of *Services* members amounts to approximately 2.9% of pensionable emoluments. This is slightly lower than the current difference in contributions paid in respect of *Services* and *Other* members but highlights the appropriateness of the difference in contribution rates.

9.10 The level of contributions should be monitored as part of each actuarial valuation of the fund to ensure that it is in line with the adopted funding level policy.

9.11 In line with rule 7.2 of the fund's rules, which states that the employer contributions should be sufficient to ensure that the fund is able to meet its obligations at all times, subject to a minimum funding level of 100%, the funding level policy adopted by the trustees requires the trustees to ensure that the minimum funding level is above 100%. This can therefore be viewed as the primary funding objective of the fund. The employer contribution rate must be determined by the employer in consultation with the trustees and the minister of finance, with due regard to the recommendations of the most recent actuarial valuation of the fund. The funding level policy also states that the trustees should strive to maintain the funding level including contingency reserves at or above 100%. The funding level including contingency reserves of the fund at the valuation date was 81.6% with a funding level excluding contingency reserves of 119.0%. As at the valuation date the fund meets the minimum short-term funding level, but as the contingency reserves are only partially funded, does not meet its long-term funding objectives.

9.12 We recommend that the current F(Z) and A(X) factors that are used to calculate actuarial interest, as well as the F(X) factors that are used in the purchase of service calculations, be reviewed after each actuarial valuation of the fund. This will enable the trustees to determine whether the basis produces factors which are sufficiently different to warrant a change in the factors used by the fund, and to ensure that the total members' actuarial interest values are close to the valuation liabilities. These factors are attached in Appendix 8.

9.13 We are satisfied with the suitability of the fund's investment strategy, the nature of the assets of the fund and that the matching of the assets with the liabilities is, in our opinion, adequate.

9.14 Given the current financial condition and size of the fund, the self-insurance of death and ill-health retirement risks remains appropriate.

9.15 We recommend that the key demographic assumptions used for the fund be monitored through an experience analysis exercise every three to five years.

9.16 On the basis that the fund has met its funding objectives and that the current contributions are expected to cover the cost of future benefits with specific reference to the risks mentioned in paragraph 8.13 above as well as the fact that the contingency reserves are 41.4% funded, we can confirm that the fund was in a sound financial condition as at 31 March 2024.

SANDILE MBILI
Fellow of the Actuarial Society of South Africa
in my capacity as valuator to the GEPF
and as a director of
African Origins Actuarial Solutions

ANDRE RONALD PIENAAR
Fellow of the Actuarial Society of South Africa
in my capacity as the peer review actuary
and as an employee of
Alexander Forbes Financial Services

For the purposes of professional regulation, the primary professional regulator of the signatories to this report is the Actuarial Society of South Africa.

October 2024

APPENDIX 1: SUMMARY OF BENEFITS AND CONTRIBUTIONS

A summary of the main benefits is given below. Full details are contained in the registered rules of the fund. Where there are special cases or benefits for particular members, these have been taken into account in the valuation.

Definitions

1. **Actuarial interest:** ***For a member younger than 55 years:***

   N(adj) x FS x F(Z), where:

   N(adj) = member's adjusted service at termination date, and

   F(Z) = a factor determined by the board of trustees and the minister of finance acting on the advice of the actuary.

   and

   For a member older than 55 years:

   G + (A x A(X)), where:

   A(X) = a factor determined by the board of trustees and the minister of finance acting on the advice of the actuary.

   A (Annuity) and G (Gratuity) are in this case always calculated using the formulae for members with 10 years of service or more.

   Actuarial interest is always at least equal to the cash resignation benefit, which is summarised in paragraph 36 below.

2. **Annuity (A):** ***Less than 10 years of pensionable service:***

   nil

   10 or more years of pensionable service:

   1/55 of FS for each year of service, plus R360 per annum.

3. **Annuity increases:** Determined by the board of trustees acting on the advice of the actuary.

4. **Final salary (FS):** Average pensionable emoluments during the last 24 months of pensionable service.

5. **Gratuity (G):** ***Less than 10 years of pensionable service:***

15.5% of FS for each year of pensionable service.

10 or more years of pensionable service:

6.72% of FS for each year of pensionable service.

6. **Pension age:** In accordance with service conditions. For the purposes of this valuation, retirement was assumed to occur in line with the specified retirement decrement tables.

7. **Pensionable emoluments:** The basic annual salary plus any other emoluments recognised as pensionable.

8. **Pensionable service:** Period since commencing service with the employer during which contributions were paid, including any additional service purchased and excluding any periods of leave-without-pay not allowed for in the rules.

9. **Potential service:** Period from commencement of pensionable service until the normal retirement date at pension age.

10. **Prospective service:** Period from the current age until the pension age.

Normal retirement benefit

Less than 10 years of pensionable service:

11. A gratuity equal to a member's actuarial interest

10 or more years of pensionable service:

12. A gratuity of G and an annuity of A.

13. The gratuity is increased by 12% for members of the SANDF who are younger than 53 years at retirement.

14. In the case of *Services* members, pensionable service is increased by 25% for each year of pensionable service completed in excess of 10.

Early retirement benefit

15. As for normal retirement but reduced by 1/3% for each complete month by which early retirement date precedes normal retirement date.

Late retirement benefit

16. With employer approval. Benefit is as for normal retirement.

Ill-health retirement benefit

Less than 10 years of pensionable service:

17. A gratuity of 1.33 x G

10 or more years of pensionable service:

18. A gratuity of G and an annuity of A.

19. Pensionable service is increased by the smaller of 5 years, and 1/3 of pensionable service completed and prospective service.

20. The gratuity is increased by 12% for members of the SANDF who are younger than 53 years at retirement.

21. In the case of *Services* members, pensionable service is also increased by 25% for each year of pensionable service completed in excess of 10.

22. Effective 1 October 2017, the ill-health benefit is subject to a minimum of the resignation benefit.

Death in service benefit

Less than 10 years of pensionable service:

23. A gratuity of the greater of FS (as defined in paragraph 4 above) and actuarial interest.

10 or more years of pensionable service:

24. A gratuity of 5 x A + G.

25. Pensionable service is increased by the smaller of 5 years, 1/3 of pensionable service completed and prospective service.

26. In the case of *Services* members, pensionable service is also increased by 25% for each year of pensionable service completed in excess of 10.

10 or more years of potential service:

27. A spouse's pension of 50% x A.

28. Pensionable service is based on full potential service.

29. In the case of *Services* members, pensionable service is also increased by 25% for each year of pensionable service in excess of 10.

Child's pension:

30. On the death of the member, a child's pension of 25% of the member's annuity becomes payable, subject to a minimum amount determined by the trustees, which cannot be less than R200 per month. The benefit remains payable until age 22, or for life in the case of a financially dependent disabled child.

Death benefit after retirement

31. A spouse's pension of 50% x A, unless the member elected a reduced pension or gratuity with a 75% spouse's annuity.

32. A child's pension of 25%, increased from 10% from 1 June 2018, of the member's pension. If the orphan's pension becomes payable on the death of a surviving spouse who was in receipt of a spouse's pension, the orphan's pension is increased by the ratio of the spouse's pension at the date of his or her death to the initial spouse's pension. Effective 31 March 2009, the benefit is subject to a minimum amount determined by the trustees, which cannot be less than R200 per month. The benefit remains payable until age 18, age 22 if the child is a full-time student, or for life in the case of a financially dependent disabled child.

33. If death occurs within the 5 years following retirement, a gratuity is payable equal to the balance of 5 years' annuity payments (excluding the R360 per annum pension).

Funeral benefit

34. A funeral benefit of R15 000 on the death of a member, pensioner or spouse and R6 000 on the death of an eligible child or stillborn child. The funeral benefit was increased to R20 000, effective 1 April 2024.

Discharge benefit

35. On discharge due to abolition of post or in the interest of the employer, the benefit is as for ill-health retirement.

Resignation benefit

36. On discharge due to misconduct or resignation or ill-health occasioned by own doing, a gratuity of:

    7.5% x FS x pensionable service.

    The benefit is increased by 10% for each completed year of pensionable service between 5 and 15.

37. The benefit is subject to a minimum of the member's actuarial interest.

Injury on duty benefits

38. The rules specify various gratuities and annuities which are payable. These are, however, paid directly by the state and are not funded. They have therefore been ignored for the purpose of this valuation.

Contribution rates

39. Members contribute at a rate of 7.5% of pensionable emoluments

40. The employer is required to contribute at a level to ensure the fund can meet its obligations. The employer currently contributes at a rate of 16% of pensionable emoluments for *Services* members and 13% for *Other* members.

41. Additional costs to the fund resulting from the granting of early retirement or discharge benefits, other than due to ill-health, are borne by the government, the employer or both.

42. The cost or benefit improvements for specific groups of members are borne by their employers.

Expenses and other costs

43. Running expenses are borne by the fund.

Note

44. The above summary outlines the main benefits as they apply to most members. Certain members (directors general, teachers and SANDF members with long service, etc.) may be subject to special provisions, which have not been listed above. We understand that the number of such members is not significant in terms of the overall membership of the fund.

APPENDIX 2: MEMBER STATISTICS

Contributory membership at the valuation date

1. The contributory membership changed as follows over the valuation period:

	Number of members
Active members at 31 March 2021	**1 270 444**
Opening adjustments	11 548
Entrants	169 438
Exits	
Corrections per GPAA	(5 658)
Withdrawal	(59 613)
Retirement	(77 419)
Ill-health	(4 019)
Death	(17 149)
Transfer	(8 330)
S-Case	(15 242)
Active members at 31 March 2024	**1 264 000**

The opening adjustment reflects members who were not present in the 31 March 2021 valuation data but who had service dates prior to 1 April 2021.

2. A summary of the membership data on which the valuation was based is set out below:

Age at 31 March 2024	Number of members	Pensionable emoluments (R'000)
< 20	34	7 552
20 – 24	9 832	2 650 501
25 – 29	80 703	23 926 035
30 – 34	147 751	44 666 805
35 – 39	181 253	56 308 251
40 – 44	191 840	61 686 343
45 – 49	194 547	68 150 618
50 – 54	219 145	85 761 236
55 – 59	179 197	74 568 303
60 - 64	59 156	24 486 215
65+	542	218 061
Total	**1 264 000**	**442 429 920**

3. The number of active members contained in this report differs from the report of the board of trustees reflected in the fund's audited financial statements at the valuation date. The report reflects the active membership as 1 277 902. We were not provided with an individualised listing of the members included in that figure. For the purposes of our valuation, the administrator provided a listing of members as at 31 March 2024 and a listing of members who exited over the valuation period. In arriving at the membership shown above, we excluded any appropriate exits. As part of the data validation process, the administrator excluded erroneous records prior to submitting the raw dataset to African Origins and Alexander Forbes. We queried further records where necessary and excluded erroneous cases after receiving appropriate confirmation from the administrator.

Pensioners

4. A reconciliation of the change in the number of active pensioners over the valuation period is provided below:

	Retirees	Dependants	Total
Number at 31 March 2021	**315 397**	**170 228**	**485 625**
Retirements	74 969	-	74 969
New Dependants	-	33 236	33 236
Appearances	8 641	25 825	34 466
Deaths	(40 650)	(18 224)	(58 874)
Suspended over 10 years	(5 279)	(5 048)	(10 327)
Ceased to be eligible	(293)	(5 760)	(6 053)
Pension type corrections	20	(20)	-
Number at 31 March 2024	**352 805**	**200 237**	**553 042**

The pensioner statistics above exclude 48 400 pensioners and dependants at 31 March 2024 (and 33 487 at 31 March 2021) that were inferred from retirements and deaths in the valuation data, but for whom no individual data were provided. Of the 48 400 such cases at 31 March 2024, 14 122 were reflected as retirements or dependants of members who died in service and 34 278 were reflected as dependants of pensioners who died. Of the 33 487 such cases at 31 March 2021, 2 467 were reflected as retirements or dependants of members who died in service and 31 010 were reflected as dependants of pensioners who died.

5. A summary of the membership data on which the valuation was based is set out below:

Age at 31 March 2024	Number of pensioners	Pensions (R'000)
<20	21 292	904 268
20 – 24	2 868	132 916
25 – 29	229	15 420
30 – 34	929	80 319
35 – 39	2 936	252 159
40 – 44	6 309	539 957
45 – 49	13 193	1 161 297
50 – 54	23 880	2 267 055
55 – 59	46 278	6 682 444
60 - 64	110 711	22 245 456
66 - 69	119 607	22 844 941
70 - 74	83 911	13 176 822
75 - 79	55 226	6 764 569
80 - 84	37 275	4 139 094
85 - 89	19 310	2 291 102
90 - 94	6 933	850 800
95 - 99	1 803	229 027
100+	352	904 268
Total	**553 042**	**85 481 914**

6. At 31 March 2024 there were 553 042 pensioners, with pensions (including increases up to 1 April 2024) of R85 482 million per annum.

7. As at 31 March 2024 there were 7 deferred members, with total pensionable emoluments of R158 000 per annum.

Reasonableness checks performed

8. Many tests were carried out on the reasonableness and consistency of the data, including the following:

- a reconciliation of the number of members and pensioners at the valuation date and the previous valuation date, with the movements in membership reported
- reasonableness tests on the salary and pension amounts, and the various membership dates (dates of joining, dates of pensionable service and dates of exit)
- identifying any missing or invalid data fields
- reviewing the fund's annual financial statements
- reconciling exiting members with the claims paid in the annual financial statements
- calculation of the fund's investment returns
- a review of the levels of actual and projected fund expenses

Data quality and certification

9. The reader is referred to our separate report, prepared in October 2024 and titled *"Government Employees Pension Fund - Statutory actuarial valuation as at 31 March 2024: Data quality report"*, for a detailed discussion of the quality of the data provided for the statutory valuation as at 31 March 2024. This report contains a comparison with the quality of the data provided for the 31 March 2021 statutory valuation.

10. In general, there was an improvement in the data quality compared to the previous statutory valuation. With regards to the valuation to be performed as at 31 March 2024, we are satisfied with the general accuracy and completeness of the data and with its suitability for this purpose.

APPENDIX 3: CONSOLIDATED REVENUE ACCOUNT

	Fund account R'm	Reserve accounts R'm	Total R'm
Opening balance as at 31 March 2021	**2 036 176**	**5 171**	**2 041 346**
Income			
Member contributions	91 129	-	91 129
Purchase Periods of Service (GEPF Members)	124	-	124
Purchase Periods of Service (Divorce Benefits)	143	-	143
Purchase Periods of Service (Past Discriminatory Members)	1 103	-	1 103
Employer contributions	166 172	-	166 172
Interest on outstanding contributions	1	-	1
Transfers from other funds	53	-	53
Other Income	609	-	609
Expenses	**(3 901)**	-	**(3 901)**
Benefits			
Pensions	(208 324)	-	(208 324)
Gratuities	(67 986)	-	(67 986)
Withdrawal benefits	(91 687)	-	(91 687)
Retrenchment benefits	(4 641)	-	(4 641)
Transfers out	(30)	-	(30)
Child and orphan’s benefits	(2 926)	-	(2 926)
Death benefits	(26 578)	-	(26 578)
Funeral benefits	(1 357)	-	(1 357)
Interest paid to members	(2 459)	-	(2 459)
Interest paid to dormant members	(0)	-	(0)
Divorce benefits	(48)	-	(48)
Unclaimed benefits	(1)	-	(1)
Discriminatory Practices Reserve drawdown	-	(1 103)	(1 103)
Sub total	**1 885 573**	**4 068**	**1 889 640**
Investment income	454 114	-	454 114
Transfers between accounts	(1 202)	1 202	-
Closing balance as at 31 March 2024	**2 338 485**	**5 270**	**2 343 754**

APPENDIX 4: FUNDING METHOD, VALUATION BASES AND ASSUMPTIONS

FUNDING METHOD

Introduction

1. This statutory actuarial valuation was considered in two parts:

   - pensionable service up to the valuation date ("past service"); and
   - pensionable service after the valuation date ("future service").

Valuation methodology in respect of accrued benefits: past service liabilities

Active members

2. The liability in respect of the active members has been calculated using the **projected unit** method. At the previous valuation date, the same funding method was used.

3. The past service liability in respect of active members at the valuation date was calculated by estimating the benefits expected to become payable in respect of service that had accrued up to the valuation date. Allowance was made for future salary increases to the date of retirement (or earlier exit) and pension increases after retirement. These projected benefits were then discounted back to the valuation date, thus producing the past service liability at the valuation date.

Pensioners

4. The liability in respect of pensioners was calculated as the present value of the expected payments in respect of these pensions, including allowance for future pension increases on a basis consistent with the pension increase policy and with communications to pensioners.

5. The benefits in respect of suspended pensioners have been valued on the same basis as those of active pensioners. Factors were then applied to these calculated liabilities to allow for the reducing probability that pensions will recommence after they have been in suspension for several years.

6. An experience investigation was conducted concurrent to the interim valuation as at 31 March 2020 analysing the probability of reinstatement of suspended pensioners. Based on that analysis the same assumptions from the statutory valuation as at 31 March 2021 have been applied again for the reinstatement of suspended pensioners.

7. The factors applied for purposes of the statutory valuation as at 31 March 2024 were as follows:

Period of suspension	Factor applied	
	Main and Spouse pensioners	Child pensioners
Less than 12 months	80%	10%
12 to 23 months	65%	7.5%
24 to 35 months	50%	5%
36 to 47 months	35%	0%
48 to 59 months	20%	0%
60 to 119 months	5%	0%
120 months and more	0%	0%

Deferred pensioners

8. The liability in respect of the deferred pensioners was calculated as the present value of the expected payments in respect of these pensions, including allowance for future pension increases, on a basis consistent with the pension increase policy and with communication to pensioners.

Notional pensioner accumulation amount

9. The fund is not governed by the Pension Funds Act and there are no requirements in terms of the rules of the fund to separate "pensioner assets" from the other assets of the fund. The calculation of the notional pensioner accumulation amount is therefore included in this report for illustrative purposes and should the fund fall under the Pension Funds Act in future. It is, however, used in the recommendations for annual pension increases.

10. The "notional pensioner accumulation amount" is calculated by:

- determining the fair value equivalent of each pensioner's liability at retirement date (and at the commencement date of any spouse's pension in the case of the spouse of a pensioner who died prior to the valuation date);
- for each deferred pensioner the fair value equivalent is instead determined at the date of termination of service;
- allowing for any contingent benefits payable in the event of the death of a pensioner and deferred pensioner;
- deducting any pension payments made prior to the valuation date;
- adding the value of any special increases that have been granted to pensioners and deferred pensioners which were funded otherwise than through the returns earned on the assets backing the pensioner and deferred pensioner liabilities; and
- accumulating the above to the valuation date using the investment returns earned on the assets backing the pensioner and deferred pensioner liabilities.

11. The above calculation was performed for each pensioner and deferred pensioner who was alive at the valuation date.

12. To calculate the notional pensioner accumulation amount, the following assumptions were required:

- The starting value from the last valuation was used;
- No deductions were made from the starting value for deceased pensioners;
- Assumed expenses in respect of pensioners were allowed for.

13. The notional pensioner accumulation amount amounted to R922 476 million at the valuation date and was 17.7% higher than the pensioner and deferred pensioner liabilities calculated on a best estimate basis and is 91.9% of the pensioner liabilities plus full recommended reserves for pensioners. This compares to an amount of R700 157 million at 31 March 2021, being 117.6% of the funding level excluding contingency reserves and 94.1% of the funding level including contingency reserves.

Valuation methodology in respect of benefits accruing after the valuation date: future service liabilities

Projected unit method of funding

14. The future service contribution rate was calculated by estimating the additional liabilities expected to accrue over the 2 years following the valuation date, but allowing for future salary increases to the date of retirement (or earlier exit) and dividing by the present value of the pensionable emoluments expected over the ensuing 2 years. Allowance has been made for assumed future salary and pension increases, mortality and investment returns.

15. The objective of this funding method is that at the end of the 2 years the additional assets accumulated will equal the increase in the past service liabilities, if the valuation assumptions are borne out in practice.

16. This method of funding effectively assumes that the composition of the fund by age, salary and gender will remain relatively stable over the 2 years with withdrawals, deaths and retirements being replaced by younger new entrants. If the salary-weighted average age of the fund decreases (increases) then, all other things being equal, the future contribution rate will decrease (increase).

Death in service and funeral benefits

17. The accrued portions of the death in service spouse and child pension benefits have been valued as past service liabilities. The future service contribution rate includes an allowance for these benefits as well as the lump sum death in service and funeral benefits accruing in the relevant period following the valuation date.

Administration and ad hoc expenses

18. We have made a current cost estimate of the fund's administration fees and expected ad hoc expenses for the purpose of determining the recommended employer contribution rate. The current cost estimate was based on actual fees and expenses paid during the last 3 years, expressed as a percentage of pensionable emoluments of all members over the same period.

BASES AND ASSUMPTIONS

Explanation of "best estimate" assumptions

19. The FSCA issued PF Circular 117 which details the principles to be adopted in setting the valuation basis for funds. The principles underlying this circular are accepted as best practice in South Africa and therefore should be considered. The circular also covers the use of "*best estimate*" assumptions.

20. The following are relevant extracts from the circular:

" 1. "Best estimate" assumptions

"Best estimate" assumptions should be used in the determination of the accrued liabilities and should be motivated with reference to the experience of the fund or similar funds or to statistics published or endorsed for use by the Actuarial Society of South Africa.

1.1. Subject to the exception in 4.1 below, the actuarial assumptions should be "best-estimate assumptions".

1.2. No deliberate margins of conservation should be included in the assumption.

1.3. The assumptions should be motivated by reference to any of the following:

- *the experience of the fund, taking into account of the size of the fund and underlying trends in that experience where the actuary deems it appropriate to do so;*
- *statistical evidence relating to*
  - *funds in general, or*
  - *relevant published annuitant or in-service mortality or morbidity, including the effect of HIV/AIDS, or*
  - *an investigation performed within a firm of valuators in respect of funds advised by that firm where that evidence may relate to demographic items or to economic items such as the equity premium; or*
- *yields on classes of government or corporate bonds which, in terms of the actuarial method used by the valuator, determine the discount or inflation rates assumed at the valuation date.*

The valuator should include the motivation in the report, and should make a copy of any investigation used in this motivation available to the Registrar, upon request.

Published mortality and morbidity investigations will include investigations published by ASSA, the Institute, Faculty and Society of Actuaries, and any statutory or industry body in South Africa or in other jurisdictions where the experience may be similar to that in South Africa or may be adjusted to be so similar.

1.4. The use of "best-estimate" assumptions may result in a strengthening of the assumptions as used at the previous statutory actuarial valuation. This is acceptable provided it has been motivated as set out above."

The fund's best estimate assumptions

21. We have again adopted a "best estimate" assumption basis for this statutory actuarial valuation, as explained below. The assumptions used for the valuation of the fund as at the previous valuation date have been provided for comparison

Valuation of assets

22. Assets have been valued at 100% of market or fair value. This is consistent with the assumptions used at the previous valuation date.

Valuation of liabilities

Net pre-retirement discount rate

23. For this valuation the investment return assumption (15.0%) was derived from the government bond yield curve at the valuation date, considering the duration of the fund's combined liabilities. A duration of 15.03 years was used.

24. The allocation of the fund's assets, based on the latest strategic asset allocation is around 40% to domestic bonds (at 15.0% p.a.), 42% to domestic equities (at 16.1% p.a.), 10% to developed market equities (at 16.0% p.a.) and 8% to emerging market equities (at 17.1% p.a.). As explained in section 6.3 of this report, the expected return on this basis has been calculated as 15.7%.

25. No allowance has been made for investment fees since it was assumed that the active return earned from active asset management will equal the investment fees charged.

26. The final assumption was (15.0% x 40%) + (16.1% x 42%) + (16.0% x 10%) + (17.1% x 8%) = 15.7% per annum.

27. The net pre-retirement rate was set at 14.4% per annum at the previous valuation date.

Expected future inflation

28. Expected future inflation was set with reference to conventional and inflation-linked bond yields, where:

Inflation = conventional bond yield - inflation-linked bond yield – inflation risk premium (0.5% per annum)

29. The inflation risk premium reflects that investors in conventional bonds will expect a higher prospective real return since their real return is less certain than an investor in inflation-linked bonds.

Therefore, the expected future inflation on 31 March 2024

= 15.0% - 5.2% - 0.5%
= 9.3% per annum

30. The assumption in respect of expected future inflation was set at 9.2% per annum at the previous valuation date.

General salary escalation

31. Based on an Alexander Forbes Financial Services investigation into national salary experience, we have assumed that salaries increase at an average rate of 1% in excess of the increase in expected future inflation, i.e. at a rate of 10.3% per annum.

The best estimate financial assumptions are summarised in the table below:

	31 March 2021	31 March 2024
Yield on nominal bond of appropriate duration	14.2%	15.0%
Less yield on real bond	(4.5%)	(5.2%)
Less inflation risk premium	(0.5%)	(0.5%)
Long-term inflation	**9.2%**	**9.3%**
Pre-retirement		
Return on domestic bonds	5.7%	6.0%
Return on domestic equities	8.7%	6.7%
Return on developed market equities		1.6%
Return on emerging market equities		1.4%
Net pre-retirement discount rate (A)	**14.4%**	**15.7%**
Long-term inflation	9.2%	9.3%
Excess over inflation	1.0%	1.0%
Salary inflation (B)	**10.2%**	**10.3%**
Real pre-retirement discount rate [(1+A)/(1+B)-1]	**3.72%**	**4.91%**
Post-retirement		
Long-term investment return (A)	14.4%	15.7%
Pension increases (C)	7.4%	7.5%
Net post-retirement discount rate [(1+A)/(1+C)-1]	**6.42%**	**7.71%**

Promotional salary increases

32. In addition, the impact of merit or promotional salary increases is considered based on the following table:

Age	Services	Other
20	2.48%	4.35%
25	2.98%	4.66%
30	2.72%	3.80%
35	2.80%	3.06%
40	2.37%	2.53%
45	1.81%	2.21%
50	1.57%	1.87%
55	1.46%	1.42%
60	1.41%	1.23%

33. The assumptions detailed above are lower than those used at the previous valuation date, following the investigation into the demographic experience of the fund completed in 2024.

Net post-retirement discount rate

34. The trustees have adopted a formal pension increase policy to give effect to section 25 of the GEP Law and GEPF rule 23, to establish the pension increase that is affordable and to guide the trustees in their determination of the annual pension increase. According to rule 23, the fund aims to grant minimum pension increases, if affordable, of 75% of inflation subject to a minimum pension of the original pension increased with 75% of full inflation. We have assumed that this is equal to an average provision for pension increases of 80% of the assumed annual increase in price inflation, as pensioners who reach the minimum of 75% of their original pension plus full inflation must get full inflationary increases thereafter.

35. Given that the inflation assumption is set at 9.3% per annum, this implies that pension increases of 7.5% per annum are targeted by the pension increase policy. It would therefore be appropriate to use a net post-retirement discount rate of 7.71% per annum (1.1573 / 1.0745 -1) at the valuation date.

36. The net post-retirement discount rate adopted by the trustees in the previous valuation was 6.42% per annum.

37. We are satisfied as to the reasonable expectation that the targeted pension increases are sustainable considering the assumptions used and the investment strategy adopted.

Results on alternative "bond-based approach" and "equity risk premium approach"

38. The FSCA now requires, in terms of PF Notice No. 2 of 2016, the Notice on Financial Soundness, 2016, that where a fund uses the "risk premium approach" for a valuation, it must also show the results on the more conservative "bond-based approach".

39. Whilst the fund is not subject to the requirements of the Pension Funds Act, 1956 and the notices thereto, we have considered the notice thereto, the intention behind the notice and the implications that it may have on the fund were the fund to comply with the notice or fall under the ambit of the Act.

Bond based approach

40. In terms of the bond-based approach, the appropriate pre-retirement rate would be the return on long term bonds of appropriate duration, being 15.0% as at 31 March 2024.

41. The expected future inflation assumption is then set by subtracting the effective yield on inflation-linked bonds of the same duration from the yield on long term bonds of the same duration and allowing for an inflation risk premium (0.5%). The expected future inflation assumption would therefore be 9.3% per annum (15.0% - 5.2% - 0.5%). The expected salary increase assumption, before merit salary increase, would therefore be 10.3% per annum (9.3% + 1.0%), and the net pre-retirement discount rate 4.26% (1.150 / 1.103– 1).

42. In terms of the bond-based approach, the appropriate post-retirement rate would be the return on long term bonds of appropriate duration at the valuation date, being 15.0% as at 31 March 2024, over the pension increase target of 80.0% of inflation - so (1.150 / 1.075) - 1 = 6.98%.

Equity risk premium approach

43. Valuations prior to 2021 were done on a 3% equity risk premium basis. The allocation of the fund's assets to equities is around 60%, resulting in an equity risk premium of 1.8% (3.0% x 60% = 1.8%).

44. The appropriate pre-retirement rate on the equity risk premium approach would be the return on long term bonds, with an allowance for the risk premium – so 15.0% + 1.8% = 16.8%.

45. With an expected future inflation assumption of 9.3%, the expected salary increase assumption, before merit salary increase, would be 10.3% (9.3% + 1.0%), and the net pre-retirement discount rate 5.89% (1.168 / 1.103 – 1).

46. Given that the inflation assumption is set at 9.3% per annum, this implies that pension increases of 7.5% per annum are targeted by the pension increase policy. It would therefore be appropriate to use a net post-retirement discount rate of 8.65% per annum (1.168 / 1.075 -1) at the valuation date.

47. The comparative valuation results would be:

Valuation approach	Assets R'm	Liabilities R'm	Funding level
Current best estimate approach	2 343 754	1 969 521	119.0%
3% equity risk premium approach	2 343 754	1 764 230	132.8%
Bond based approach	2 343 754	2 133 850	109.8%

Demographic assumptions

48. An investigation into the demographic experience of the fund was completed in 2024, carried out over the period 1 April 2012 to 31 March 2023. The full details of the investigation are set out in the report finalised in February 2024: *"Government Employees Pension Fund Demographic Investigation for the period 1 April 2012 – 31 March 2023".*

49. The board adopted the new assumptions on 26 June 2024. The new assumptions are set out below.

Pre-retirement mortality

50. We propose to use the new assumptions approved by the board. The mortality rates are mostly lower than those used in the previous valuation. A sample of the independent decrement rates used is provided in the table below:

Age	Male Services	Female Services	Male Other	Female Other
20	0.10%	0.07%	0.04%	0.07%
25	0.22%	0.10%	0.12%	0.10%
30	0.30%	0.13%	0.19%	0.15%
35	0.36%	0.17%	0.28%	0.19%
40	0.42%	0.20%	0.38%	0.23%
45	0.51%	0.24%	0.49%	0.26%
50	0.64%	0.31%	0.64%	0.32%
55	0.76%	0.34%	0.86%	0.40%
60	0.88%	0.38%	1.08%	0.45%
65	0.97%	0.42%	1.18%	0.45%

51. In terms of APN 206, detailed allowance for the effect of HIV/AIDS morbidity and mortality should be included in a valuation where there is adequate information to facilitate modelling the effect of the epidemic on membership and where the cost of such an approach can be justified. There is not adequate information available for fund members, and the cost of the investigation is not believed to be justified. No direct allowance has therefore been included for the effect of HIV/AIDS on the liabilities of fund members, although the trustees should be aware that the contribution in respect of lump sum and other death benefits could increase in the future because of the impact of HIV/AIDS.

Post-retirement mortality

52. We propose using the same assumptions as for the previous valuation approved by the board. A sample of the independent decrement rates used is provided in the table below:

Age	Males	Females
50	2.24%	1.20%
55	2.24%	1.17%
60	2.26%	1.27%
65	2.28%	1.56%
70	3.24%	2.19%
75	4.85%	3.37%
80	7.44%	5.46%
85	12.01%	8.97%
90	18.60%	14.59%

Withdrawal

53. Consistent with previous valuations, no allowance was made for exiting the fund, other than by way of death or retirement.

Ill-health retirement rates

54. We propose to use the new assumptions approved by the board. Assumptions are mostly lower than those used in the previous valuation. A sample of the independent decrement rates used is provided in the table below:

Age	Male Services	Female Services	Male Other	Female Other
20	0.00%	0.00%	0.00%	0.00%
25	0.00%	0.00%	0.00%	0.00%
30	0.01%	0.00%	0.00%	0.00%
35	0.05%	0.06%	0.02%	0.02%
40	0.08%	0.09%	0.03%	0.03%
45	0.16%	0.20%	0.06%	0.05%
50	0.33%	0.41%	0.15%	0.12%
55	0.51%	0.61%	0.27%	0.23%
60	0.60%	0.48%	0.27%	0.24%
65	0.00%	0.00%	0.00%	0.00%

Retirement rates (in good health)

55. We propose to use the new assumptions approved by the board. The assumptions are higher for *Other* members and lower for *Services* members, than in the previous valuation. A sample of the independent decrement rates used is provided in the table below:

Age	Male Services	Female Services	Male Other	Female Other
55	7.36%	6.26%	2.27%	2.53%
56	4.22%	3.08%	2.15%	2.39%
57	3.68%	2.91%	2.23%	2.48%
58	3.91%	3.23%	2.50%	2.82%
59	6.22%	4.80%	3.01%	3.33%
60	74.46%	60.89%	19.29%	21.56%
61	20.06%	15.78%	11.71%	16.20%
62	11.95%	14.26%	10.42%	14.19%
63	11.79%	14.42%	10.20%	13.40%
64	12.70%	14.61%	14.35%	15.21%
65	34.62%	45.00%	79.57%	82.69%

Spouse's age difference

56. We have assumed that husbands are 4 years older than their wives. This is consistent with the assumption used at the previous valuation date.

Proportion married

57. We propose to retain the assumptions used in the previous valuation. These assumptions are provided in the table below:

Age	Proportion married
20	25.0%
25	32.5%
30	46.0%
35	65.00
40	80.0%
45	92.5%
50	97.5%
55	97.5%
60+	97.5%

Commutation

58. On retirement, a gratuity is payable on top of the pension benefit. No commutation of the pension is therefore allowed.

Children's pensions

59. For current active members, an implicit allowance has again been made in the valuation for the liability in respect of contingent future children's pensions by assuming a spouse's pension of 64% instead of 50%. For main pensioners, we made a direct valuation of the contingent children's pensions by assuming 7 out of 100 pensioners have a child of age 11 at the valuation date.

Solvency reserving basis

60. Historically an asset-liability matching ("*ALM*") approach has been used for calculating solvency reserves. Alternative approaches, such as the discontinuance matching strategy and bond basis approach, are permissible. For this valuation a Value at Risk model was used, analysing the risks and rewards of various investment strategies.

Value at Risk approach

61. The level of the solvency reserve that could be established in the fund as a buffer against investment volatility has been determined in consultation with investment actuaries, using a Value at Risk model.

62. The approach was to:

- Project the Fund's assets and liabilities into the future, focusing on the projections after three years.
- Analyse the risk-return (or risk-reward) outcomes for the Fund's current strategic asse allocation, each asset class, and for 4 999 randomised portfolios.
- Calculate a 90% Value at Risk using Monte Carlo simulations, utilising the risk-return outcomes specific to the Fund's current strategic asset allocation.

The resulting value is the 90% value at risk to meet the financial loss in the worst 10% of economic scenarios.

63. Using this approach the solvency reserve at the valuation date was determined to be R401 040 million.

Discontinuance matching strategy

64. The FSCA's PF Circular 117 outlines an alternative basis for setting up solvency reserves within funds. The discontinuance matching approach allows for a 0.5% reduction in the pre- and post-retirement discount rates for the reasonable cost of implementing and maintaining a matched investment strategy.

65. The solvency reserve has been calculated as the difference between:

- the past service liabilities calculated on the assumption that the fund has implemented a matched investment strategy; and
- the past service liabilities calculated on the best estimate valuation basis.

66. In effect, the solvency reserve represents the difference in past service liabilities on a conservative basis and the liabilities on a realistic basis.

67. At the valuation date, index-linked bonds were trading at an average yield of 5.2%. The average yield on long dated nominal bonds at this date was 15.2%.

68. The maximum allowance for future inflation when determining the solvency reserve is the difference between the nominal and index-linked bond yields, i.e. 15.2% - 5.2% = 10.0%.

69. In the above calculations, the yields were estimated from the yield curve at the valuation date, taking consideration of the fund's active member and pensioner liabilities.

70. The solvency basis so derived is set out below:

	31 March 2021	31 March 2024
Yield on nominal bond of appropriate duration	14.2%	15.2%
Less yield on real bond	(4.5%)	(5.2%)
Less inflation risk premium	-	-
Long-term inflation	**9.7%**	**10.0%**
Pre-retirement		
Return on nominal bond	14.2%	15.2%
Return on equities	-	-
Cost of implementing and maintaining matching strategy	(0.5%)	(0.5%)
Net pre-retirement discount rate (A)	**13.7%**	**14.7%**
Long-term inflation	9.7%	10.0%
Excess over inflation	1.0%	1.0%
Salary inflation (B)	**10.7%**	**11.0%**
Real pre-retirement discount rate [(1+A)/(1+B)-1]	**2.71%**	**3.33%**
Post-retirement		
Long-term investment return (A)	13.7%	14.7%
Pension increases (C)	7.8%	8.0%
Net post-retirement discount rate [(1+A)/(1+C)-1]	**5.47%**	**6.20%**

71. On the discontinuance matching method, the solvency reserve amounts to R395 447 million. However, to limit the contingency reserve to what is affordable, the solvency reserve has been adjusted to R372 005.

Bond basis

72. The bond basis is essentially the discontinuance matching approach, but the prescribed basis is typically weaker as an assumption regarding an inflation risk premium is permitted in terms of the bond basis. Note, however, that the discontinuance matched approach described above has an artificial limitation on the strength of the basis, and as a result the liability on the bond basis may be higher than on the discontinuance matched approach.

73. We have retained the 0.5% inflation risk premium used in the best estimate basis. We believe that this is reasonable and would ensure consistency in calculation over subsequent valuations if the same inflation risk premium is used in both calculations. The only difference between the bond basis and the best estimate basis is the assumed return on equity that is used in the best estimate basis.

APPENDIX 5: ANALYSIS OF CHANGE IN FINANCIAL POSITION

1. The valuation of the fund as at 31 March 2024 disclosed excess assets of R374 233 million on the best estimate valuation basis over the accrued liabilities excluding contingency reserves. The previous valuation at 31 March 2021 revealed excess assets of R186 827 million. The overall change in financial position during the valuation period was therefore an improvement of R187 406.

2. The analysis of the change in financial position is summarised below and discussed in further detail thereafter.

Change in financial position	R'm
Excess assets at 31 March 2021	**186 827**
Interest on surplus at previous valuation	92 889
Investment income	(527 785)
Calculation methodology	7 757
Active member experience	(57 878)
Pensioner experience	50 229
Salary increases	167 471
Contribution shortfall	(6 423)
Pension increases	34 221
Expenses	(255)
Economic basis	375 583
Demographic basis and promotional salary scale	51 392
Miscellaneous items	205
Excess assets at 31 March 2024	**374 233**

Interest on excess assets at 31 March 2021

3. At 31 March 2021 the fund reflected excess assets of R186 827 million. With interest at the previous valuation rate of 14.4% per annum to 31 March 2024, the surplus would have been R279 716 million. This implies an increase in the excess assets of some R92 889 million.

Investment income

4. It was assumed that the assets of the fund would earn 14.4% per annum. Over the valuation period the fund earned approximately 7.35% per annum on the market value of assets. This resulted in a substantial strain of R527 785 million.

Calculation methodology

5. The model used to determine the valuation liabilities was adjusted to better reflect the benefits in terms of the fund rules. This resulted in an improvement of R7 757 million.

Active member experience

6. The demographic experience of the active membership differed compared to that assumed in the previous statutory valuation basis. The overall impact was a strain of R57 878 million.

Pensioner experience

7. The demographic experience of the pensioners differed compared to that assumed in the previous statutory valuation basis. The overall impact was a release of R50 229 million.

Salary increases

8. Actual salary increases granted during the valuation period, for members who were present at both valuation dates, averaged 7.6% per annum and were lower than the average 12.6% per annum salary increases (including an allowance for merit salary increases) anticipated by the previous valuation assumptions. This resulted in a release of R167 471 million.

Contribution shortfall

9. The contributions paid into the fund were lower than those required to fund the benefits accruing over the valuation period. This resulted in a strain of R6 423 million.

Pension increases

10. Pension increases of approximately 5.7% per annum on average were granted during the valuation period, whereas the valuation basis made allowance for increases of approximately 7.4% per annum. This led to a release of approximately R34 221 million.

Expenses

11. The previous valuation assumed that administration expenses would be approximately 0.3% of active member pensionable emoluments per annum. A strain of R255 million arose due to expenses being higher than assumed.

Change in valuation basis

Economic basis

12. The net pre-retirement and net post-retirement discount rates, in the current best estimate valuation basis, are higher than those as at the previous statutory valuation date. The impact on the active and pensioner liabilities are shown below:

Category	Release/(strain) R'm
Active members	301 155
Pensioners	74 428
Total	**375 583**

Demographic basis and promotional salary scale

13. An investigation into the demographic experience of the fund was completed in 2024, carried out over the period 1 April 2012 to 31 March 2023. The board adopted the new assumptions on 26 June 2024. The impact on the active and pensioner liabilities are shown below:

Category	Release/(strain) R'm		
	Demographic assumptions	Promotional salary scale	Total
Active members	(6 787)	58 150	51 392
Pensioners	n/a	n/a	n/a
Total	**(6 787)**	**58 150**	**51 392**

Miscellaneous items

14. There are various items of profits and strains produced by other miscellaneous sources, including membership movements and data changes. These items have not been quantified separately, but in total produced a release of some R 205 million.

APPENDIX 6: LIABILITIES AND RESERVES

Data reserve

1. Following an analysis of the data received for the valuation we would recommend that the data reserve for members be maintained in line with the practice applied in previous valuations.

2. A data reserve of 0.75% of the active member liability, or some R8 620 million, has been held at the valuation date. This is consistent with the approach used in the previous valuation.

Discriminatory practices reserve

3. We have maintained the reserve in respect of previous discriminatory practices, being the accumulated value of 1% of the funding level in 1998.

4. The value of this reserve, as per the fund's financial statements, was R5 270 million at the valuation date. The change in the value of the reserve that was used for valuation purposes is shown in the table below:

Discriminatory practices reserve (R millions)	Other past discriminatory practices reserve	General assistants' reserve	Total
Opening balance as at 31 March 2021	**4 835**	**148**	**4 983**
Plus: Transfer from net investment return to reserves	675	6	681
Less: Benefits paid	(563)	-	(563)
Balance as at 31 March 2022	**4 947**	**154**	**5 101**
Plus: Transfer from net investment return to reserves	181	9	190
Less: Benefits paid	(419)	-	(419)
Balance as at 31 March 2023	**4 709**	**163**	**4 872**
Plus: Transfer from net investment return to reserves	281	14	295
Less: Benefits paid	(121)	-	(121)
Balance as at 31 March 2024	**4 869**	**177**	**5 046**

5. The sum of the above reserve accounts amounts to R5 046 million, differing from the financial statements by R244 million (the Ciskei Striker's Reserve reflected in the financial statements).

6. The GPAA has confirmed that the records of members impacted by the Ciskei Strike have been credited in full with the relevant additional service. Considering that the valuation liabilities should reflect the value of the benefits in respect of this additional service, there should be no need to hold an additional reserve. This matches the treatment in the recent actuarial valuations.

Mortality improvement reserve

7. Significant improvements in mortality have been observed internationally and it is likely that we will follow a similar pattern in South Africa. The improvements in the mortality rates at older ages are attributable to advances in science, medicine and living conditions. It is appropriate to include an explicit allowance for mortality improvements in this valuation as was done in the previous valuation.

Mortality improvements for active members

8. To make allowance for future mortality improvements, we have assumed post-retirement mortality rates for active members in line with the best estimate basis but rated down two and a half years (i.e. we have assumed that a future pensioner is two and a half years younger than their actual age, which allows for a longer expected lifetime). This allowance for post-retirement mortality improvements amounted to R23 677 million at the valuation date.

Mortality improvements for current pensioners

9. We have assumed mortality rates for active members in line with the best estimate basis but rated down one and a half year (i.e. we have assumed that a pensioner is one and a half year younger that their actual age). This allowance for mortality improvements amounted to R22 429 million at the valuation date.

100% CPI pension increase reserve

10. The trustees of the fund have decided to set up an explicit reserve to enable them to exercise greater discretion in granting future pension increases in line with inflation. Based on the pension increase policy of the fund, the valuation basis allows for pension increases of 80% of CPI (being the targeted increase of 75% of CPI plus a margin for the purchasing power catch-up needed to ensure that 75% of the original pension maintains 100% of CPI increases).

11. The pension increase reserve has been established to provide for the possibility of granting pension increases at 100% of CPI. Separate reserves provide for the increase in the active member and pensioner liabilities and the present value of the increase in contribution rates that would be required for future pension increases of 100% at CPI. Establishing an explicit reserve allows the trustees to target this level of increase without changing the valuation basis, which assumes a pension increase target if 80% of CPI.

12. The 100% CPI pension increase reserve amounted to R455 905 million at the valuation date and is made up as follows:

100% CPI pension increase reserve	R'm
Active members	140 202
Pensioners	102 532
Future service contribution rate	213 171
Total	**455 905**

Solvency reserve

Solvency reserve for reporting purposes (Value at Risk approach)

13. As noted in Appendix 4, the solvency reserve has been based on a Value at Risk approach for this valuation using the solvency reserve calculated by investment actuaries of Alexander Forbes. The recommended reserve at the valuation date was R401 040 million (R459 152 million at 31 March 2021 calculated by Riscura on an asset-liability approach).

Solvency reserve based on the discontinuance matching (DCM) strategy approach

14. Using this approach instead, the recommended solvency reserve would be as follows:

Solvency reserve (DCM)	31 March 2021 R'm	31 March 2024 R'm
Active members (including S-cases)	211 782	282 544
Pensioners (including deferred pensioners)	45 163	89 461
Total	**256 945**	**372 005**

Solvency reserve based on the bond basis approach

15. Using this approach instead, the recommended solvency reserve would be as follows:

Solvency reserve (Bond Basis)	31 March 2021 R'm	31 March 2024 R'm
Active members (including S-cases)	18 706	101 335
Pensioners (including deferred pensioners)	4 285	42 864
Total	**22 991**	**144 199**

Comparison of the different solvency reserve approaches

16. A comparison of the results under the different approaches is provided below:

Solvency reserve	Value at Risk R'm	DCM R'm	Bond basis R'm
Active members (including S-cases)	not provided*	282 544	101 334
Pensioners (including deferred pensioners)	not provided*	89 461	42 865
Total	**401 040**	**372 005**	**144 199**

**The Value at Risk approach does not provide a split of the solvency reserve between active members and pensioners.*

Summary of contingency reserves

17. The table below provides a summary of the recommended reserves and the amounts held at the current and previous valuation dates:

Contingency reserve accounts	31 March 2021		31 March 2024	
	Recommended R'm	Held R'm	Recommended R'm	Held R'm
Fully funded and considered part of the funding level excluding contingency reserves:				
Data reserve	9 135	9 135	8 620	8 620
Discriminatory practices reserve	4 983	4 983	5 046	5 046
Fully funded reserves	**14 119**	**14 119**	**13 666**	**13 666**
Funded to the level affordable and considered part of the funding level including contingency reserves:				
Mortality improvement reserve	49 955	10 453	46 106	19 107
100% CPI pension increase reserve	383 733	80 296	455 905	188 931
Solvency reserve	459 152	96 078	401 040	166 195
Partially funded reserves	**892 840**	**186 827**	**903 051**	**374 233**
Combined reserves	**906 959**	**200 945**	**916 717**	**387 899**

18. As can be seen from the table above, the Data Reserve and the Discriminatory Practices Reserve have been funded in full whilst the rest have been funded to the extent affordable, which is 41.4% as at the valuation date (some 20.9% at the previous valuation).

19. We are satisfied that:

- the balance of the contingency reserves is not greater than that which is reasonably required in terms of the contingency in respect of which the accounts have been established; and
- the overall amount set aside in contingency reserve accounts is not unreasonable.

APPENDIX 7: SENSITIVITY ANALYSIS

The fund's liabilities have been calculated on best estimate assumptions. The effect of a 1% change in the main assumptions on the financial position and the required contribution rate is illustrated below:

Funding level excluding contingency reserves

Assumption	-1%	Central	+1%
Investment return	106.6%	119.0%	132.0%
Salary increases	122.4%	119.0%	112.9%
Pension increases	126.7%	119.0%	111.5%

Required contribution rate

Assumption	-1%	Central	+1%
Investment return	12.3%	9.4%	7.2%
Salary increases	7.9%	9.4%	11.2%
Pension increases	8.6%	9.4%	10.4%