Strictly confidential

December 2022

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Prepared by
NMG Consultants and Actuaries (Pty) Ltd

For
University of the Witwatersrand Retirement Fund
(12/8/31841)

Report on the Statutory Actuarial Valuation as at 1 January 2022

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1. Executive Summary

This report is addressed to the trustees of the University of the Witwatersrand Retirement Fund as prescribed by the Pension Funds Act, 1956 and reflects the results of a statutory valuation performed as at 1 January 2022.

This section provides a brief summary of the key aspects of the report. The valuation covers the period from 1 January 2019 to 1 January 2022.

1.1 Valuation results

	1 January 2022	1 January 2019
Market value of investments	R4,871,174,400	R3,207,046,900
Adjustments	(R70,636,100)	(R53,142,200)
Value of assets	**R4,800,538,300**	**R3,153,904,700**
Accumulated liabilities	R4,673,661,600	R3,098,083,800
Reserve accounts	R108,457,300	R34,219,800
Value of total liabilities	**R4,782,118,900**	**R3,132,303,600**
Unallocated assets	R18,419,400	R21,601,100
Unallocated assets percentage	0.39%	0.69%

The change in the financial position is primarily due to a mismatching strain in relation to the allocation of returns to members.

1.2 Membership

	1 January 2022	1 January 2019
Number of members:		
- Actives	**5,061**	**4,948**
- Paid-up members	**94**	**43**
Salary weighted average age	**47.7**	**47.4**
Average pensionable salaries	**R311,100**	**R280,100**

Details of the membership profile are shown in Section 3.

1.3 Recommendations

1.3.1 Rule amendments and benefit design

The rules are summarised in Appendix A. We are satisfied that the Fund is administered correctly in terms of the Rules and have no recommended changes to the Rules.

1.3.2 Reinsurance factors

As outlined in section 7.3, better control is required around the reinsurance benefits and how these are reflected in the annual financial statements. A monthly audit and check of the values in conjunction with the actuarial team has been implemented. We have also performed an historical check and audit of all claims over the last 36 months to allow the pensioner reserve account to be correctly aligned.

The reinsurance amounts are adequate, and no changes are required in this regard. Better communication to members is however required to ensure that members whose beneficiaries are no longer eligible for the benefits cancel the cover to avoid unnecessary over insurance.

1.3.3 Provision for expenses and risk premiums

As outlined in section 6.3, the contributions paid towards risk premiums and expenses were equal to the cost of the risk premiums and the amounts allocated towards the cost contingency reserve account. These rates have however increased and communication with the members is required in relation to the impact on their retirement benefits. A review of the adequacy of the expense deduction from members is also required.

1.3.4 Investment Strategy

The assets of the Fund have been certified as being matched to the nature of the liabilities. No changes to the investment strategy are necessary.

There is a timing mismatch between the assets and liabilities in some of the portfolios which can cause the fund to have a deficit as the returns allocated to members will be different from the underlying return earned on the assets. A process is required to align the reporting and to monitor this more closely in future.

1.4 Certification

1.4.1 Financial soundness

Section 1.5 of the Executive Summary contains the opinion of the actuary as to the financial soundness of the Fund in the normal course of events. This fulfils the requirements of Section 16 of the Pension Funds Act as well as the guidelines laid down by the Actuarial Society of South Africa for pension fund valuations.

1.4.2 Matching of assets and liabilities

Section 8.5 outlines the actuary's opinion on the satisfactory matching of the Fund's assets and liabilities.

1.4.3 Adequacy of reinsurance arrangements

In the event of a death of a member, the benefit is a pension as can be secured by the greater of:

(a) The member’s Share of the Fund; or

(b) Twice the Member’s annual Fund Salary at the date of death.

The Trustees, at the request of the deceased Member’s dependants, may permit this pension to be either wholly or partially commuted for a cash lump sum.

The Spouse’s Benefit (voluntary) provides a spouse’s pension of 40% of Fund Salary on the death of the Member payable until the date when the Member would have attained age 65 (60 in the case of members who died before 1 December 2004).

The Children's Benefit (compulsory unless a Member states that he or she has no Child and therefore does not require this benefit) provides a child's pension of 20% of Fund Salary per child (maximum 2 children) on the death of the Member.

The twice annual salary benefit (less share of fund) has been fully reinsured and the Fund does not carry any residual liability. The new factors adopted for the spouse's and children's cover are adequate and no review is required at this time.

1.4.4 Report preparation

This report complies with Standard of Actuarial Practise Note 201 of the Actuarial Society of South Africa and Board Notice 149 of 2010 as issued by the Financial Sector Conduct Authority and PF Notice 2 of 2016.

1.5 Actuarial opinion

I have investigated the principles of operation of the Fund over the period from the previous valuation of the Fund as at 1 January 2019.

I have used information supplied by the administrators of the Fund concerning the rules of the Fund, the systems upon which it is administered, the assets, the members' individual accounts, the balance in the reserve account. I have confirmed that the data matches the information provided to the Board of the Fund at the corresponding year-end. However, recommended changes to the reserve account balances are outlined in 1.3.4 above.

The Fund is in a sound financial position as at the valuation date.

This report must be submitted to the Financial Sector Conduct Authority by no later than 1 January 2023.

The required documents for signature by the Board are attached to the report. This should be returned as soon as possible to allow the report to be submitted timeously.

The next valuation will be undertaken as at 1 January 2025.

This report was prepared for the University of the Witwatersrand Retirement Fund by NMG Consultants and Actuaries (Pty) Ltd and is:

Signed by:	Assisted by
Natasha Huggett-Henchie, BBusSc FIA FASSA* CFP®	Shannon Briers-Louw BSc Mathematical Sciences
In my capacity as valuator of the Fund and employee of NMG Consultants and Actuaries (Pty) Ltd	Actuarial Analyst – NMG Retirement Funds Employee of NMG Consultants and Actuaries (Pty) Ltd

December 2022

* For the purposes of professional regulation the primary professional regulator is the Actuarial Society of South Africa.

2. Introduction

This report is addressed to the trustees of the University of the Witwatersrand Retirement Fund as prescribed by the Pension Funds Act, 1956 and reflects the results of a statutory valuation performed as at 1 January 2022.

The previous statutory valuation was carried out as at 1 January 2019 and was approved by the FSCA on 23 July 2020.

2.1 Objectives of the investigation

The main objectives of this investigation are to:

- establish the financial condition of the Fund by comparing the assets to the basic liabilities at the valuation date;
- determine the need for and the balances appropriate to any contingency reserve accounts required for the fund;
- test the allocation of the unit prices over the valuation period and verify that the members' shares calculated by the administrator are reasonable;
- recommend the action required to restore the Fund to financial soundness, if applicable, or distribute any excess assets over liabilities;
- determine the adequacy of the future service contribution rates to fund for the accrual of benefits, including the allocation to risk benefits and expenses;
- investigate the structure of the assets and their appropriateness for the matching of the liabilities.

2.2 Valuation method and assumptions

Accrued liabilities are taken as the total value of the share of fund account in respect of in-service members, as well as the value in the various reserve accounts previously established, all accumulated using the investment returns per the declared unit prices applicable to each category.

The pensioners are valued using the assumptions outlined in Appendix A. The liability is compared to the assets held within the pensioner account to determine the pensioner funding level. If there are sufficient assets in the pensioner account, a solvency margin would be established within the pensioner account.

2.3 Inter-valuation period

During the period since the last valuation, the experience of the Fund has been as follows:

2.3.5 Rules

A summary of the current benefit structure per the Rules of the Fund is outlined in Appendix A.

The following rules and rule amendments have been introduced since the previous valuation as at 1 January 2019.

Consolidated new rules effective 1 September 2018 were registered by the Financial Sector Conduct Authority on 3 December 2020.

- **Amendment No. 1 (Approved 13 June 2022)**
  The purpose of this amendment is as follows:
  - To clarify that a paid-up member may at any time elect payment or transfer of his fund credit.
  - To increase the term of office of the trustees from three to five years and to replace references to a three-year period by references to a five-year period.
  - To correct a previous referencing error in Rule 5.1.1.
  - To allow for the member to elect the Spouse's or Children's benefit in the event of his death.
  - To allow for the reduction of benefits if the insurer has restricted the member's benefit to also apply to the spouses and children's pensions. The actuary will calculate the equivalent spouse's and/or children's benefit based on the reduced benefit received from the insurer.
  - To annuitize the member's retirement benefits in line with the compulsory annuitisation requirements in the Tax Act.

2.3.6 Contributions, risk premiums and expenses

The contribution, risk premiums and expenses have been follows:

	January 2019	January 2020	January 2021	March 2022
Group Life insurance (Compulsory)	0.28 per mille	0.225 per mille	0.225 per mille	0.40545 per mille
Funeral Cover	R15.36	R15.36	R15.36	R19.97
Spouse Life Cover (Optional)	0.86%	1.10%	1.10%	1.749%
Children's Life Cover (Compulsory if children)	0.66%	0.74%	0.74%	1.1766%
Disability	0.80%	0.75%	0.712%	0.655%@
Administration	R65 pmpm	R65 pmpm	R65 pmpm	R65 pmpm
Unitisation fees*	0.08% of assets	0.08% of assets	0.08% of assets	0.07% of assets

@ From 1 January@ From 1 January 2022 increasing back to 0.72% from 1 January 2023.

*The unitisation fees have reduced to 0.07% of assets from 1 January 2022.

From 1 March 2022 the fund has experienced a dramatic increase in the insurance rates which will reduce member's retirement funding contributions, which in turn will impact future retirement benefits.

2.3.7 Transfers-in and out

The table below shows the transfers-in that were received by the Fund over the inter-valuation period:

Transferor Fund	No of members	Effective date	Assets received R
Individual transfers	9	Various – 2019	R6,816,800
Individual transfers	3	Various – 2020	R255,900
Individual transfers	8	Various – 2021	R4,745,000

2.3.8 Investments

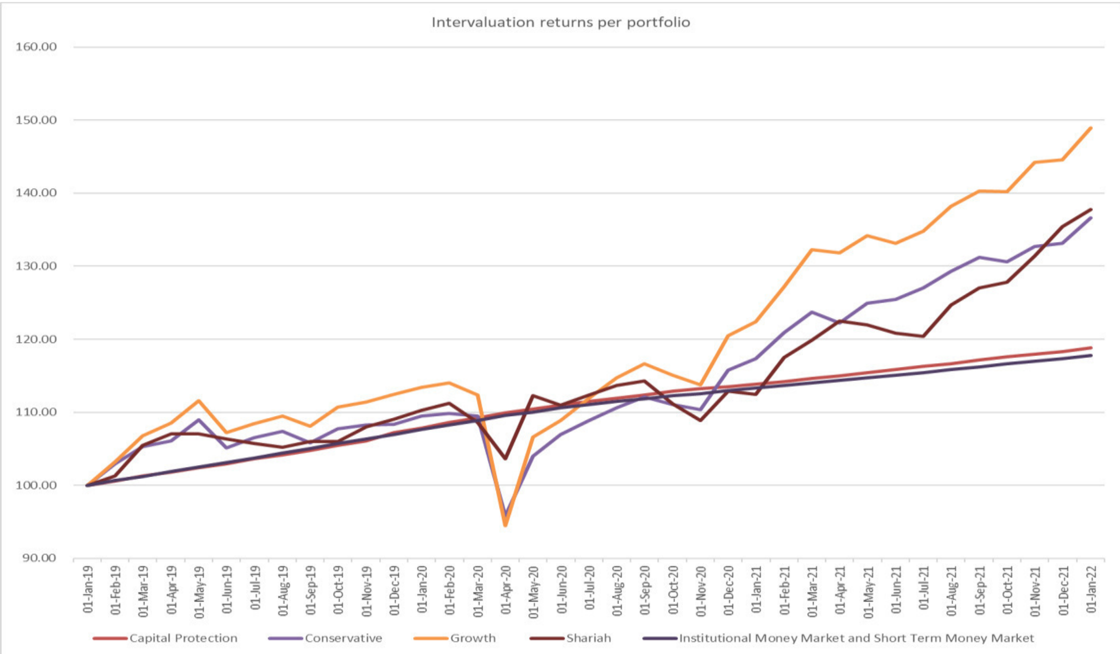
The investment returns on the Fund's assets compared to inflation were as follows:

	Average % pa
Portfolio yields	
- UWRF Shari'ah	11.28%
- Wits Capital Protection	5.91%
- Short Term Money Market	5.61%
- UWRF Conservative	10.95%
- UWRF Growth	14.19%
- Liberty Institutional Money Market Fund	5.61%
Inflation	
- As measured by the Consumer Price Index	4.33%

The return allocated to members' benefits was as follows:

Year commencing	Return p.a.					
	Capital Protection	Conservative	Growth	Shari'ah	Institutional Money Market	Short Term Money Market
1 January 2019	7.78%	9.52%	13.39%	10.26%	7.61%	7.61%
1 January 2020	5.59%	7.09%	7.93%	2.02%	5.28%	5.28%
1 January 2021	4.38%	16.45%	21.67%	22.50%	3.97%	3.97%
Average	**5.91%**	**10.95%**	**14.19%**	**11.28%**	**5.61%**	**5.61%**

The cumulative returns for the inter-valuation period can be shown graphically as follows:



2.4 Subsequent events

As outlined above, from 1 March 2022 the fund has experienced a dramatic increase in the insurance rates. This does not affect the valuation, but the Board is encouraged to increase the communication to the members around the impact on their benefits. There are no other financially significant events that took place after the valuation.

3. Membership data

The valuation is based on data supplied to us by the Fund's administrator Liberty Group Limited.

As described in Appendix B, we have tested the data for reasonability and accuracy in terms of Standard of Actuarial Practice Note 201 issued by the Actuarial Society of South Africa (read in conjunction with section 16 of the Pension Funds Act). We are satisfied that the data used is sufficiently correct to derive the valuation result.

The trustees and principal officer are required to certify the correctness of the data before submission of this report to the FSCA. To this effect, a certificate in terms of section 16(8) of the Act is attached hereto.

3.1 Active members

3.1.5 Membership reconciliation

Membership reconciliation	Notes	Total
1 January 2019		**4,948**
Plus		
New entrants		894
New from paid-up		2
Less		
Withdrawals		(416)
Deaths		(76)
Retirements		(228)
Transfer to paid-up		(63)
1 January 2022		**5,061**
Salary weighted average age (years)		
1 January 2019		47.4
1 January 2022		47.7
Average Pensionable salary (Rand p.a.)		
1 January 2019		280,000
1 January 2022		311,100

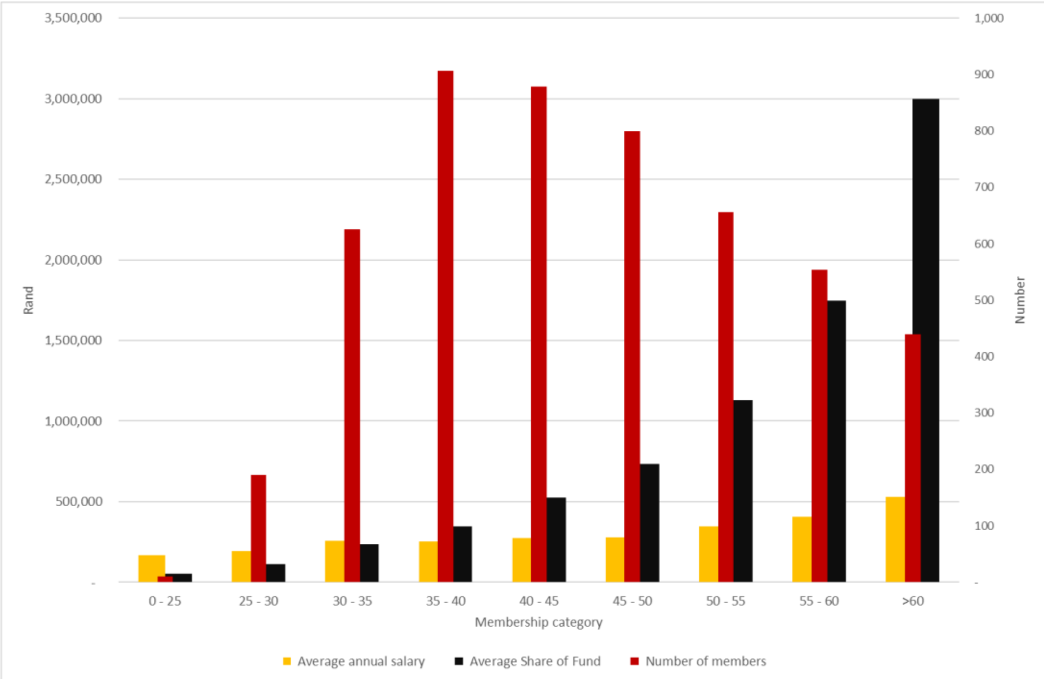
3.1.6 Age group summary

A summary of the membership data by age group is as follows:

Age group	Number of members	Average annual salary	Total Share of Fund	Average Share of Fund
0 - 25	10	167,200	523,200	52,300
25 - 30	190	194,900	21,407,800	112,700
30 - 35	626	255,100	146,542,800	234,100
35 - 40	907	253,900	313,595,900	345,800
40 - 45	879	273,800	460,896,000	524,300
45 - 50	799	277,700	584,816,600	731,900
50 - 55	656	345,400	740,359,800	1,128,600
55 - 60	554	405,700	968,784,600	1,748,700
>60	440	527,300	1,318,350,000	2,996,300
Total	**5,061**	**311,100**	**4,555,276,700**	**900,100***

*

The profile can be visually shown as below:



3.2 Paid-up members

3.2.5 Membership reconciliation and summary

Membership reconciliation	Total
1 January 2019	**43**
Plus	
New paid-up members	78
Less	
Transfer to active	(2)
Withdrawals	(17)
Retirements	(7)
Deaths	(1)
1 January 2022	**94**
Value of deferred benefits	
1 January 2019	34,508,200
1 January 2022	118,384,700

3.3 Pensioners

Membership reconciliation	Notes	Spouses	Children	Total
1 January 2019		**32**	**47**	**79**
Adjustment	1	(3)	3	-
Plus				
New pensioners	2	29	68	97
Less				
Pensioners ceased	3	(14)	(14)	(28)
1 January 2022	4	**44**	**104**	**148**
Total annual pension				
1 January 2019		2,984,200	1,841,200	4,825,400
1 January 2022		5,348,400	3,906,800	9,255,200
Pension weighted average age				
1 January 2019		56.5	15.4	41.0
1 January 2022		56.0	16.6	39.3

Notes:

1. Adjustment for child pensioners erroneously classified as spouse pensioners in the member reconciliation of the previous valuation. This does not affect the fund as the liabilities were correctly valued.

2. New pensioners include members that were paid subsequent to the valuation period i.e. after 31 December 2021 but whose pensions commenced within the valuation period.

3. We have removed pensioners whose termination dates have been reached. These include 1 spouse pension (Vergie) and 2 children's pensions (Vergie and Simayile) that started receiving pensions in the inter-valuation period but ceased within the period.

4. The total number of pensioners as at the valuation date differs from the AFS due to the following:

    - We have valued all suspended pensioners. These pensioners will only be removed when we have proof of termination.
    - We have valued all pensioners with outstanding documentation to finalise the cases. These cases will only be loaded on the Administration system once all the necessary documentation have been received.

    All pensioners will receive back pay from commencement to date of first payment and this has been allowed as a liability.

4. Assets of the Fund

A summary of accounting transactions and asset information is set out below. The actuary has accepted the records of the investment managers and has not actually verified the existence of the securities.

The accounts have been derived from the audited financial statements.

4.1 Value of assets

The underlying net assets of the Fund are as follows at the valuation date, with previous valuation results provided for comparison purposes:

Value of assets	**Notes**	**1 January 2022** **R**	**1 January 2019** **R**
Abax investments (Pty) Ltd	1	338,492,000	203,927,000
ABSA Bank Limited	1	314,069,000	-
Allan Gray Life Limited	1	493,435,100	611,872,900
Apex fund Services	1	55,891,200	61,579,400
Baillie Gifford & Co	1	663,712,700	441,156,300
Coronation Asset management (Pty) Ltd	1	477,640,900	403,647,900
ETFSA Portfolio Management	1	224,179,200	-
Futuregrowth Asset Management (Pty) Ltd	1	399,264,100	354,926,500
Ninety One (Investec) Bank Limited	1	36,600	-
Ninety One (Investec) Investment Platform	1	2,483,900	6,200,400
Liberty Group Limited	1	52,910,800	58,489,300
Ninety One SA (Pty) Ltd	1	212,521,200	-
Oasis Crescent Capital (Pty) Ltd	1	64,510,100	39,619,600
Riscura (Pty) Ltd	1	-	6,200
SEI Investments (South Africa)	1	-	365,108,700
STANLIB Asset Management Ltd	1	362,747,200	401,444,500
Sanlam Investment Management (Pty) Ltd	1	318,261,000	105,571,200
Sesfikile Capital (Pty) Ltd	1	128,535,800	151,356,400
Standard Bank of SA Ltd	1	34,857,100	1,987,200
Sygnia Asset Management	1	491,243,800	-
Vulcan Value Partners LLC	1	235,316,800	-
Total investments		**4,870,108,500**	**3,206,893,500**
Bank Account		1,065,900	153,400
Unclaimed Benefits	2	(31,801,700)	(27,903,200)
Other net debtors and creditors	3	(37,500,600)	(29,631,400)
Net assets per financial statements		**4,801,872,100**	**3,149,512,300**
Actuarial adjustments	4	(1,333,800)	4,392,400
Net assets per valuation report		**4,800,538,300**	**3,153,904,700**

Notes:

1 The assets have been valued at fair market value, as confirmed by the auditors.

2 For valuation purposes we have included the unclaimed benefits per the values held on the administrator records and included in the financial statements.

3 An adjustment was made to reflect net debtors and creditors as per the annual financial statements as follows:

Net debtors and creditors	1 January 2022 R	1 January 2019 R
Amounts receivable	17,665,100	5,205,900
Benefits payable	(53,972,300)	(34,024,600)
Amounts payable	(1,193,400)	(812,700)
Total	**(37,500,600)**	**(29,631,400)**

4 The actuarial adjustments to the assets are as follows:

Actuarial adjustments	Sub-notes	1 January 2022 R	1 January 2019 R
Suspended pensioners	a	968,300	255,400
Reinsurance accruals	b	-	5,046,900
Back pay	c	(1,764,200)	(909,900)
Sanlam Share Allocation	d	(537,900)	-
Total		**(1,333,800)**	**4,392,400**

Notes:

(a) The adjustment is to the pensions payable for suspended pensioners. The financial statements have made provision for payments beyond the date at which the applicable 'child' would have reached 25. We have reversed the adjustment for the applicable period beyond age 25. The provision in the AFS is R1,925,300 and the correct provision should be R957,000.

(b) These are the reinsurance proceeds which were allowed for in the previous valuation.

(c) These pension payments are due to new pensioners who were not receiving pensions at valuation date, but their commencement dates should have been within the inter valuation period from the date of death of the member as well as possible over-recovery of R211,200 from the administrators or the pensioners themselves that have been overpaid in the intervaluation period.

(d) This is a payment in respect of Sanlam Shares pertaining to some members who were formerly members of a prior fund (NEHAWU) whose benefits were transferred into the Fund when the NEHAWU Fund was wound up. It is pending allocation to the former members and has been housed (temporarily) in the Cost Contingency Reserve. We have separately ring fenced these assets as an amount payable.

4.2 Revenue account

Below is a build-up of the assets since the previous valuation, summarising all accounting transactions during the inter-valuation period:

1 January 2019 to 31 December 2021	**Notes**	**R**
Accumulated Funds at beginning of period - Valuation		**3,153,904,700**
Reverse actuarial adjustments	1	(4,392,400)
Accumulated Funds at beginning of period - AFS		**3,149,512,300**
Plus Income		
Contributions	2	1,011,211,100
Transfers from other funds		11,817,800
Reinsurance recoveries		95,745,700
Other income	3	50,700
Net investment income	4	1,543,048,200
Less expenditure		
Benefits awarded	5	(916,246,400)
Pension payments		(22,022,700)
Change in unclaimed benefits		(4,393,600)
Reinsurance premiums		(46,443,600)
Expenses	6	(20,407,400)
Accumulated Funds at end of period - AFS		**4,801,872,100**
Add actuarial adjustments	7	(1,333,800)
Accumulated Funds at beginning of period - Valuation		**4,800,538,300**

Notes:

1. Refer to note 4 of 4.1 for details. We have reversed the actuarial provisions made at the previous valuation date as the transactions are reflected in the revenue build-up over the period if applicable. Or if not will be provided for again in the actuarial adjustments at the end of the period.

2. Details of the contributions received are as follows:

	R
Details of contributions	**1,011,211,100**
Contributions - employer retirement	946,469,100
Contributions - employer risk and costs	58,654,600
Additional voluntary contributions	6,087,400

3. This relates to a PI claim recovery from the fund administrator for a member. The additional compensation paid to the member (R101,300) is included as an "expense" in the cost contingency reserve.

4. Details of the investment income are as follows:

		R
Details of investment income		**1,543,048,200**
Income from investments (Interest)		33,570,300
Income from investments (Insurance policies)		66,937,100
Collective investment schemes distribution		1,449,900
Adjustment to fair value		1,474,245,400
Investment management fees		(33,154,500)

5. Details of the benefits awarded are as follows:

		R
Details of benefit payments		**(916,246,400)**
Withdrawal benefits		(207,597,700)
Divorce payments		(9,354,300)
Retirement benefits		(586,652,300)
Death benefits		(112,642,100)

6. Details of the expenses are as follows:

		R
Details of expenses		**(20,407,400)**
Administration fees		(6,066,800)
Consulting fees		(2,299,600)
Actuarial fees		(808,300)
Audit fees		(933,600)
Bank charges		(5,900)
Fidelity insurance		(602,100)
FSCA levies		(379,100)
Board expenses		(90,700)
Principal Officer expenses		(1,408,400)
Unitisation fees		(616,000)
Investment consulting fees		(5,770,800)
Compensation paid	a	(101,300)
Regulation 28 reporting fees		(488,600)
Pension admin fee		(31,600)
Accounting fees		(129,000)
Legal fees		(30,900)
Travelling expenses		(2,700)
Election fees		(517,000)
Other	b	(125,000)

a. Refer to note 3 above.

b. This is IT services for R4,100 plus R120,800 to ICTS.

7. Refer to note 4 of section 4.1 above for details.

4.3 Investment portfolio build-up

The build-up of the investment portfolios over the inter-valuation period is as follows:

1 January 2019 to 31 December 2021	Abax Investments (Pty) Ltd	Allan Gray Life Limited	Apex Fund Services	Baillie Gifford & Co	Coronation Asset Management (Pty) Ltd	Futuregrowth Asset Management (Pty) Ltd	Investec Asset Management (Pt) Ltd	Liberty Group Limited
Balance at beginning of period	**203,927,000**	**611,872,900**	**61,579,400**	**441,156,300**	**403,647,900**	**354,926,500**	**6,200,400**	**58,489,300**
Plus Income								
Investment income	90,232,500	124,625,600	4,982,700	432,046,800	204,532,800	95,975,100	50,730,000	10,992,700
Investments	105,500,000	46,000,000	-	-	62,520,600	99,980,100	160,486,000	851,915,300
Less expenditure								
Investment management fees	-	(5,964,300)	-	-	(9,361,800)	(5,468,800)	-	-
Disinvestments	(61,167,500)	(283,099,100)	(10,670,900)	209,490,400	(183,698,600)	(146,148,800)	(2,374,700)	(868,486,500)
Balance at end of period	**338,492,000**	**493,435,100**	**55,891,200**	**663,712,700**	**477,640,900**	**399,264,100**	**215,041,700**	**52,910,800**

1 January 2019 to 31 December 2021	Oasis Crescent Capital (Pty) Ltd	Riscura (Pty) Ltd	SEI Investments (South Africa)	STANLIB Asset Management Ltd	Sanlam Investment Management (Pty) Ltd	Sesfikile Capital (Pty) Ltd	Standard Bank of SA Ltd	ABSA Bank Ltd
Balance at beginning of period	**39,619,600**	**6,200**	**365,108,700**	**401,444,500**	**105,571,200**	**151,356,400**	**1,987,200**	**-**
Plus Income								
Investment income	14,064,800	-	(70,211,700)	57,949,500	28,538,000	4,063,600	1,858,300	57,559,900
Investments	16,418,900	-	437,800	110,392,300	641,979,400	-	31,011,600	259,182,100
Less expenditure								
Investment management fees	(1,327,500)	-	-	(2,125,800)	(895,200)	(4,532,900)	-	(2,673,000)
Disinvestments	(4,265,700)	(6,200)	(295,334,800)	(204,913,300)	(456,932,400)	(22,351,300)	-	-
Balance at end of period	**64,510,100**	**-**	**-**	**362,747,200**	**318,216,000**	**128,535,800**	**34,857,100**	**314,069,000**

1 January 2019 to 31 December 2021	ETFSA Portfolio Management	Sygnia	Vulcan Value Equity Fund	Total Investments
Balance at beginning of period	**-**	**-**	**-**	**3,206,893,500**
Plus Income				
Investment income	65,736,600	108,109,600	62,611,000	[1]1,344,397,800
Investments	159,247,900	802,311,400	172,705,800	3,520,089,200
Less expenditure				
Investment management fees	(805,300)	-	-	(33,154,600)
Disinvestments	-	(419,177,200)	-	(3,168,117,400)
Balance at end of period	**224,179,200**	**491,243,800**	**235,316,800**	**4,870,108,500**

[1] The balance of the investment income earned on the fund was R188,500 interest on the bank account and R231,616,700 on the Liberty Investment Administration system ("bank account").

5. Accounts

The Fund provides for the following accounts:

5.1 Share of fund account

The sum of the members' individual shares of fund constitutes the balance of this account. As at 1 January 2022 the value of the Share of Fund account was R4,673,661,600. The build-up of this account from the previous valuation date is shown in section 5.3.

The shares of fund have been calculated by the administrator using the monthly unit prices. The total return allocated is outlined in section 2.3.4. We have verified the individual member values and are satisfied that the values are correct.

5.2 Cost contingency reserve account

As at 1 January 2022 the value of the Cost Contingency reserve account was R1,821,200. The build-up of this account from the previous valuation date is shown in section 5.3.

5.3 Account build-up

The build-up of the various accounts (excluding the pensioner reserve account) since the previous valuation is set out in the table below:

1 January 2019 to 31 December 2021	Notes	Share of fund account	Cost Contingency reserve account	Total Liabilities (excl. pensioner account)
Balance at beginning of period - Valuation		**3,098,083,800**	**1,499,200**	**3,099,583,000**
Plus Income				
Contributions		952,556,500	12,211,000	1,512,803,900
Transfers from other funds		11,817,800	-	11,817,800
Reinsurance recoveries		5,901,700	-	5,901,700
Other income	1	-	50,700	50,700
Investment income		1,512,269,100	534,800	1,512,803,900
Less expenditure				
Benefits awarded		(906,967,300)	-	(906,967,300)
Asset based allocation to Cost Contingency		-	7,901,300	7,901,300
Administration expenses	2	-	(20,274,500)	(20,274,500)
Additional payment to member	1		(101,300)	(101,300)
Balance at end of period - AFS		**4,673,661,600**	**1,821,200**	**4,675,482,800**
Adjustment	**3**	**-**	(537,900)	(537,900)
Balance at end of period - Valuation		**4,673,661,600**	**1,283,300**	**4,674,944,900**

Notes:

1. Compensation paid to the fund and the corresponding payment to the member as outlined in note 3 of 4.2.

2. As outlined in note 6 of 4.2

3. This is a payment in respect of Sanlam Shares pertaining to some members who were formerly members of a prior fund (NEHAWU) whose benefits were transferred into the Fund when the NEHAWU Fund was wound up. It is pending allocation to the former members and has been housed (temporarily) in the Cost Contingency Reserve. We have separately ring fenced these assets as an amount payable.

5.4 Pensioner reserve account

5.4.1 Pensioner assets

The pensioner assets are invested in the Conservative risk profile. The build of this account from the previous valuation is as follows:

Pensioner account	Notes	R
Opening balance at 1 January 2019 Valuation		**32,720,600**
Reinsurance recoveries for new pensioners	1	(5,046,900)
Pensioner back pay and other adjustments	2	805,400
Opening balance at 1 January 2019 per AFS		**28,479,100**
Reinsurance recoveries for new pensioners		80,564,900
Pension payments	3	(22,022,700)
Expenses		(31,600)
Return allocated		21,595,800
Provisional closing balance at 1 January 2022		**108,585,500**
Suspended pensioners accruals	3	1,309,800
Suspended pensioners	3	(957,000)
Backpayments due to new retirees	4	(1,975,400)
Overpayments to pensioners	4	211,200
Closing balance at 1 January 2022		**107,174,000**
Value at 1 January 2022 per AFS		112,902,400
Adjustment required		(5,728,400)

Notes:

1. Refer to note 4 (b) of section 4.1 for details.

2. This is the balance of the adjustments in notes 4 (a) and (c) of 4.1 as well as the interest differential between the build-up per the last valuation and the value in the 2019 AFS (R151,000).

3. The pensioner payments include an accrual for suspended pensioners beyond the date of majority as indicated in note 4(a) of 4.1. Within the pensioner account, we have reversed the accrual so the pensioner payments over the period are in line with the actual pensions paid and then raised the provision for the payments still to be made. The total differs from the adjustment in 4(a) of 4.1 because of the prior period accruals brought forward.

4. This is the back-pay to new retirees and the provision for overpayments as outlined in note 4 (c) of 4.1

5.4.2 Pensioner liability

The value of the pensioner liability is as follows:

Pensioner account	Notes	1 January 2022 R	1 January 2019 R
Asset Value		**107,174,000**	**32,720,600**
Pensioner liability		65,800,700	31,424,100
Solvency margin		1,876,100	890,600
Reinsurance recoveries under investigation	1	23,406,500	-
Total liability		**91,083,300**	**32,314,700**
Surplus		16,090,700	405,900
Funding level		**117.7%**	**101.3%**

Notes:

1. These are reinsurance recoveries received over the valuation period but where the spouse's and children's pensions have not yet commenced. We have raised the full amount as a liability. The final actual liability may be more or less than this amount.

   Included in this amount is a provision of R1.2m for claims where the insurer has overpaid the insurance recovery and this might be refundable to the insurer. A separate report has been prepared in this regard.

5.4.3 Experience of the pensioner account

A surplus of R16,090,700 therefore exists in the account as at 1 January 2022. A summary of the components of the change in the financial position is set out below:

Item	Profit / (Strain) R	Percentage of closing liabilities
Opening surplus	**405,900**	
Interest on surplus	112,600	0.1%
Investment profit	6,486,500	7.1%
Pension increases	1,601,800	1.8%
Provision for possible refund to insurer	(1,263,700)	-1.4%
New pensioners	9,375,700	10.3%
Solvency margin	(738,500)	-0.8%
Change in basis	1,039,500	1.1%
Expenses	(31,600)	0.0%
Mortality and unanalysed	(897,500)	-1.0%
Closing surplus	**16,090,700**	

Interest on surplus	Interest on the opening surplus contributed approximately R112,600 to the surplus.
Investment loss	The actual return on the pensioner assets in the conservative portfolio of 10.95% per annum was higher than the assumed 8.50% at the previous valuation, leading to a profit to the fund.
Pension increase	The pensioners were granted lower pension increases than the provision in the previous valuation basis which has resulted in a profit to the fund.
Provision for refund	The provision for the possible refund reduces the available surplus.
New pensioners	The value of the reinsurance recoveries for the new pensioners was higher than the liability of the new pensioners, leading to a profit to the fund. There are a few factors for this: • Many members are selecting this benefit (and paying for it) but do not have eligible spouse's or children on death and the reinsurance recovery is therefore a pure profit to the fund. This is particularly relevant for older persons dying within 2 years of NRA. (The combined profit from this is R7.5m of which R5.8m comes from the older persons). • The change in the factors resulting in a profit of around R1.9m.
Solvency margin	The higher solvency reserve held at the current valuation reduced the pensioner surplus by approximately R738,500.
Change in basis	The increase in the real discount rate used in the pensioner valuation from 3.0% to 3.25% contributed approximately R1,039,500 to the pensioner surplus.
Actual expenses	Pensioner expenses lead to a strain to the pensioner account.
Mortality	This strain was a result of pensioners mortality experience, plus rounding and other items not fully analysed.

5.5 Pension increase strategy

Pensions in payment should be reviewed annually. During the inter-valuation period we undertake to advise the level of increase that can be supported by the Fund at each increase date, based on investment returns only. However, at each statutory valuation, the trustees need to implement the minimum pension increase in terms of the Pension Funds Act.

5.5.1 Pension Funds Act

The Pension Fund Act requires that:

- The trustees document a pension increase strategy which is communicated to pensioners.
- This strategy should make provision for pension increases to be considered on an annual basis, commencing on the increase immediately after the promulgation of the Act.
- Every three years commencing on the first statutory valuation after the promulgation of the Act, the pensions are granted a minimum increase equal to the lesser of the increase in CPI since retirement, and what can be afforded by the Fund based on a notional pensioner account which allows for actual investment returns and pensioner mortality.

The trustees have implemented the requirements of the Act.

5.5.2 Reasonable benefit expectations

According to Actuarial Society guidelines and Section 16 of the Pension Funds Act, the actuary is professionally bound to take the reasonable benefit expectations of members and pensioners into account in the valuation basis, specifically with regard to pension increases. This is notwithstanding the discretionary nature of the level of the increase granted taking into account the requirements of the Act.

To assess members' reasonable benefit expectations, the actuary must take into account such aspects as the Rules, the trustees' past practice with regard to pension increases, any communication to members, and any changes in future intent expressed by the employer.

It cannot be overstressed that members' reasonable benefit expectations must be carefully managed, because any changes in these expectations based on the above considerations will compel the actuary to alter the valuation basis, with potentially significant financial implications for the fund.

5.5.3 Past pension increases

Since the previous valuation pensioners in payment have been increased as follows:

Effective date	Rate of increase approved	Rate of increase implemented	CPI
1 January 2016	6.00%	6.00%	4.60%
1 January 2017	7.26%[1]	7.26%	6.80%
1 January 2018	7.40%[1]	7.40%	4.70%
1 January 2019	4.50%[2]	4.50%	4.50%
1 January 2020	3.60%	3.60%	4.00%
1 January 2021	0.00%	0.00%	3.10%
1 January 2022	8.00%	8.00%	5.90%

[1] Includes a special increase of 1.5% from pensioner surplus

[2] Was a special increase from the pensioner surplus

The history of pension increases is as follows:

Effective date	Rate of increase	CPI
1 January 2006	10.00%	3.6%
1 January 2007	10.00%	5.8%
1 January 2008	10.00%	9.0%
1 January 2009	8.50%	9.5%
1 January 2010	6.00%	6.3%
1 January 2011	5.00%	3.5%
1 January 2012	6.00%	6.1%
1 January 2013	6.00%	5.7%
1 January 2014	6.00%	5.4%
1 January 2015	6.00%	5.3%
1 January 2016	6.00%	4.6%
1 January 2017	7.26%	6.8%
1 January 2018	7.40%	4.7%
1 January 2019	4.50%	4.5%
1 January 2020	3.60%	4.0%
1 January 2021	0.00%	3.1%
1 January 2022	[2]8.00%	5.9%

5.5.4 Pension increase allowance in the valuation basis

The current valuation basis used allows for pension increases of 6.00% pa, or 100% of the general inflation assumption of 6.00% pa, but requires that the reserves set aside for current pensioners should earn a return of 9.25% pa to grant these increases.

In other words, the assets must earn 3.25% pa in order to pay the level pensions, without causing a strain on the fund. Investment returns in excess of 3.25% pa may be used to provide for pension increases without causing a strain on the Fund.

At the previous valuation, the required return on the assets was 8.50% pa, with an inflationary increase of 5.50%. We have adjusted the valuation basis as outlined in Appendix B.

Other items of experience in the pensioner account will also impact on the pension increase affordability at the statutory valuation date.

[2] Pro rata over 24 months if pension commenced in the prior 24 months.

5.5.5 Pension increase affordability and minimum increase

The minimum pension increase affordable by the Fund as at 1 January 2022 is determined below:

		% pa
Cummulative increase in CPI from 1 January 2019 to 1 January 2022	a	13.55%
Total gross return over 3 years to 1 January 2022 (pensioner assets)	b	36.58%
Required gross return per last valuation assumptions	c	9.27%
Cummulative increase granted since the previous statutory valuation	d	11.89%
Difference (the increase that can be supported by the fund) (1+b)/(1+c)/(1+d)-1	e	11.71%
Net other profit (loss) in pensioner account (g) - (e)	f	8.58%
Cummulative average increase affordable (available surplus in the pensioner account)	g	20.29%
Minimum increase to maintain 100% CPI from previous valuation date (1+a)/(1+d)-1	h	1.49%
Additional amount available to grant bonus increase (1+g)/(1+h)-1	i	18.53%

5.5.6 CPI catch-up exercise and special increase recommendation

In terms of the Pension Funds Act, a CPI "catch-up" exercise should be performed at the valuation date (if affordable). A “catch-up” means that the individual pensioners are increased by the rate of inflation since date of retirement.

By striving to provide 100% CPI “catch-ups” every three years, pensioners can be protected against the full effect of inflation. In the intermediate years, pensioners’ expectations can be managed by providing them with the level of annual increases reflected in the valuation basis, subject to affordability.

During the intervaluation period, pensioners received 11.89% and the 100% CPI over the period over the period was cumulative 13.55%. The surplus in the pensioner notional account allows for a full 100% CPI “catch-up”. The cost of the CPI “Catch-up” is R779,600 and the back payments to pensioners is R86,900 to 1 October 2022. The pensioner surplus will reduce to R15,224,200. This must be implemented as per the requirements of the Act – a schedule will be provided to the administrators.

We further recommend that the pensioner surplus be used to grant a once off 13th cheque to the pensioners as at December 2022 and that the residual be set aside to grant additional pension increases each year until the next valuation and to support the pensioners through the volatile investment climate.

6. Fund experience and reconciliation

6.1 Financial condition

The financial condition of the Fund is assessed by comparing the actuarial value of assets with the value of accrued liabilities as shown in the table below.

Financial condition	Notes	1 January 2022 R	1 January 2019 R
Actuarial value of assets	**1**	**4,800,538,300**	**3,153,904,700**
Share of fund account	2	(4,673,661,600)	(3,098,083,800)
Pensioner account	2	(107,174,000)	(32,720,600)
Cost Contingency reserve account	2	(1,283,300)	(1,499,200)
Liability for accrued benefits		**(4,782,656,800)**	**(3,132,303,600)**
Unallocated assets	3	18,419,400	21,601,100
Unallocated assets percentage		0.39%	0.69%

Notes:

1. The details of the assets are shown in section 4.1

2. The value of the liabilities and various reserve accounts are shown in sections 5.1 to 5.4. The same average return was applied to the reserve accounts as applied to the members.

3. The fund has unallocated assets of R18,419,400 (or 0.39%). The reasons for the change in the unallocated assets are discussed further in the next section.

4. The surplus reconciles with that per the financial statements as follows:

Reconciliation per the AFS	Notes	1 January 2022 R	1 January 2019 R
Unit price lag		13,554,700	22,033,500
Bank account less amounts payable		(112,400)	(639,000)
Unallocated contributions		44,700	55,800
Total per AFS		13,487,000	21,450,300
Additional per valuation		4,932,400	150,800
Suspended pensioners write back		*968,300*	*255,400*
Pensioner account balance difference	*a*	*5,728,400*	*(4,241,500)*
Other pensioner provisions		*(1,764,200)*	*4,137,000*

a. The financial statements have over-stated the investment income allocated to the pensioner account by R4,316,900 by virtue of not allowing for the return allocation on a monthly basis. Other adjustments are outlined in note 3 and 4 of section 5.4.1.

6.2 Analysis of change in financial condition

The change in the financial condition of the Fund revealed at the current valuation date can be split into various components based on the actual experience of the Fund over the inter-valuation period. A summary of the components of the change in the financial condition is set out in the following table:

Amounts to be allocated	**Notes**	**R**	**R**
Balance at beginning of period - Valuation			**21,601,100**
Reverse actuarial adjustments assets	1a		(4,392,400)
Reverse actuarial adjustments liabilities	1b		4,392,400
Reverse interest adjustment to pensioner account	1b		(150,900)
Reverse rounding	1b		(100)
Balance at beginning of period - AFS			**21,450,100**
Investment experience	2		**(7,963,300)**
Net investment income		1,543,048,200	
Allocated to Share of Fund Account		(1,512,269,100)	
Allocated to Unclaimed Benefits Account		(4,393,600)	
Allocated to Pensioner Account		(25,912,700)	
Allocated to Cost Contingency Reserve (CCR) 1	3	(534,800)	
Allocated to Cost Contingency Reserve (CCR) 2	3	(7,901,300)	
Contribution experience	4		-
Contributions allocated towards expenses		58,654,600	
Reinsurance premiums		(46,443,600)	
Contributions allocated towards CCR		(12,211,000)	
Rounding			100
Balance at end of period - AFS			**13,486,900**
Actuarial adjustments			
Actuarial adjustments assets	5		(795,900)
Actuarial adjustments liabilities	5		1,411,500
Interest adjustment pensioner account	6		4,316,900
Balance at end of period - Valuation			**18,419,400**

Notes:

1. **Reverse actuarial adjustments:** For analysis purposes, we have reversed the adjustments made at the previous valuation as the transactions will have been processed over the valuation period and reflected in the account build-up.

   a. Refer to note 4 of 4.1
   b. Refer to note 1 and of 5.4

2. **Investment experience:** The net investment income earned by the Fund was R7,963,300 less than the interest allocated to members.

   It can be expected from time to time that the investment income earned and the interest allocated to Members' Shares by means of the indices do not match exactly. This could be as a result of the following:

   - The amounts provided for Investment Fees being different than actually incurred.

- The timing of the cash-flows used for the calculation of the indices differs from the timing of the actual cash-flows used in the accumulation of the liabilities.
- Mismatch between the actual underlying assets and the deemed assets used to allocate returns to the various reserve accounts.

Once the correct return to the pensioner account is allocated (note 7 below) the investment mismatching strain is only -R3,646,400 or -0.08%

3. The first amount is the interest which was allocated to the cost contingency reserve account. The second amount is the 0.08% of assets allocated from this investment return towards funding expenses.

4. **Contribution experience:** The risk premiums and allocation to the cost contingency reserve account towards expenses were equal to the contributions that were made in respect of these items.

5. **Actuarial adjustments:** The recommended actuarial adjustments at the current valuation date as outlined in note 4 of 4.1 have reduced the assets. However, this is largely offset by the adjustments on notes 3 and 4 of 5.4.1. Usually there would be an equivalent reduction in the liabilities – the difference relates to the prior period pensioner accruals.

6. The pensioner account interest per the valuation build-up is R4,316,900 lower than the amount reflected in the financial statements which results in a profit to the fund, offsetting the investment experience as outlined in note 2 above.

6.3 Allocation of unallocated assets

The unallocated assets are primarily due to pricing differences due to timing of trades and are within the 2% margin permitted by the Financial Sector Conduct Authority and no special distribution is required.

We would however suggest that the accounting could be aligned so that the provision for the expenses payable is reflected in the cost contingency reserve account, with the equivalent reallocation of the assets.

7. Contribution rates, expenses and reinsurance

7.1 Member contribution rate

The members do not contribute to the Fund.

7.2 Employer contribution rate

Although the insured disability and funeral benefits do not form part of the Fund, the cost forms part of the total "employee benefits package" of the members and we have therefore included the contribution rate in determining the total recommended contribution rate by the employer.

The Rules of the Fund provide that the Fund acts as an agent of the employer in this regard, and the disability premiums are paid via the Fund.

The employer contribution rates are therefore as follows:

Employer contribution rates	**March 2022**	**January 2022**	**January 2019**
Employer contribution rate per rules	23.50%	23.50%	23.50%
Insured benefits & expenses			
Group Life	[3]0.43%	[4]0.27%	0.19%
PHI/Disability	0.655%	0.712%	0.80%
Administration	R65 pmpm	R65 pmpm	R65 pmpm
Funeral	[5]0.08%	[6]0.06%	0.06%
Children's cover	1.1766%	0.74%	0.66%
Spouse's cover	1.749%	1.10%	0.86%
Subtotal	**4.0906%**	**2.882%**	**2.57%**
Net employer contribution rate	19.4094%	20.618%	20.93%
Member contribution rate	0.00%	0.00%	0.00%
Total towards retirement benefits	**19.4094%**	**20.618%**	**20.93%**

[@] From 1 January 2022 increasing back to 0.72% from 1 January 2023.

This is the approximate average contribution across the fund membership. Members whose twice annual salary is significantly above the fund credit will pay a higher group life premium and members whose fund credit is higher will not pay any group life premiums.

The impact of the increase in the risk premiums is shown in the reduction in retirement benefits. The Board is encouraged to communicate the effective of this to members.

A review of the adequacy of the expense deduction from members is also required as the underlying administration fee has increased from R33.47 pmpm to R47.18 pmpm from 1 January 2022.

[3] 0.40545 per mille cover, expressed as a percentage of salary.
[4] 0.225 per mille cover, expressed as a percentage of salary.
[5] R19.97 per member per month expressed as a percentage of salary.
[6] R15.36 per member per month expressed as a percentage of salary.

7.3 Reinsurance arrangements and risk premiums

The Fund offers lump sum death benefits of 2 times the member's annual salary. This benefit has been fully reinsured and the Fund does not carry any residual liability. However, the spouses and children's cover only provides partial cover and was previously not adequately reinsured so changes to the reinsurance factors were recommended at the last valuation and adopted.

These have been reviewed with the change in the basis at the current valuation but no change is required.

The current and proposed reinsurance factors at valuation date are as follows:

Current and Proposed Purchase Factors					
Retirement Age of 65					
Age Next	**Spouse's**	**Children**	**Age Next**	**Spouse's**	**Children**
20	9.80	5.20	43	6.50	3.60
21	9.70	5.20	44	6.30	3.60
22	9.60	5.20	45	6.10	3.50
23	9.50	5.20	46	5.80	3.40
24	9.30	5.20	47	5.60	3.40
25	9.20	5.20	48	5.40	3.20
26	9.10	5.00	49	5.20	3.10
27	9.00	5.00	50	4.90	3.10
28	8.90	4.90	51	4.70	3.00
29	8.70	4.90	52	4.40	3.00
30	8.60	4.70	53	4.10	3.00
31	8.50	4.70	54	3.90	2.90
32	8.30	4.50	55	3.60	2.90
33	8.20	4.50	56	3.30	2.70
34	8.00	4.30	57	3.00	2.70
35	7.90	4.30	58	2.70	2.70
36	7.70	4.20	59	2.40	2.60
37	7.60	4.10	60	2.00	2.60
38	7.40	4.10	61	1.70	2.60
39	7.20	3.90	62	1.40	2.40
40	7.00	3.80	63	1.00	2.40
41	6.90	3.80	64	0.60	2.20
42	6.70	3.70	65	0.20	2.10

As part of the death claims audit, we have confirmed that the new factors have not been correctly applied by the administrators and insurers (leading to some over-insurance). A separate report has been prepared for consideration in this regard.

8. Investment strategy and matching

All pension funds should hold investments which are appropriate in relation to the term, nature and currency of their liabilities. Account should be taken of the split of liabilities between those fixed in monetary terms and those linked to inflation, and the composition of assets split between fixed interest type investments (bonds and cash) and real assets such as equities and property.

The actuary has a statutory duty to give advice to the trustees in order to ensure that the assets of the fund are suitably matched to its liabilities. The actual selection of the investments is entirely the decision of the investment managers, acting within the broad constraints set by the trustees, the investment consultant and the valuator to the funds, taking into account the legislative requirements.

8.1 Investment strategy

The trustees have designed 4 risk profiles for members of the Fund. These are:

- Growth Risk Profile intended for members aged under 55, or with more than 10 years to intended retirement.
- Conservative Risk Profile intended for members aged over 55, or with less than 10 years to intended retirement.
- Capital Protection Risk Profile for members aged over 60, or with less than 5 years to intended retirement.
- Shari'ah Risk profile, available to all members but designed for those of Muslim faith.

Switches are allowed to any of the profiles on an annual basis at any time of the year but only one free switch per year is permitted, the rest are charged for.

8.2 Asset allocation

The asset allocation of the Fund as the valuation date was as follows:

Asset class	Domestic Assets	International Assets	Total Assets
Cash and deposits	5.31%	0.39%	5.70%
Bonds	22.32%	0.01%	22.32%
Property	4.03%	0.07%	4.10%
Equities	39.62%	28.27%	67.89%
Other	0.00%	0.00%	0.00%
Total	**71.27%**	**28.73%**	**100.00%**

The asset allocation is based on the fact sheets of the underlying portfolios. The purpose is to assess the suitability of the underlying assets relative to the liabilities. This is not a Regulation 28 assessment which is done by the auditors.

A description of the asset classes held by the Fund are as follows:

Equities
Local Equities are securities which are listed on a stock exchange, such as the Johannesburg Stock Exchange (JSE) in South Africa, and represent shares held in specific companies i.e. ownership of a portion of a company.

Bonds
Bonds are debt instruments that are issued by the government or corporate institutions, implying that these institutions borrow money from investors to fund their capital requirements. The investor receives periodic coupon payments (interest) in addition to the principal repayment at maturity of the bond.

Property
Property represents investment in buildings and land. Property investment can be direct (i.e. buying a building) or through property companies listed on the JSE that are publicly traded.

Cash and deposits
An investment in cash includes short term obligations where the investor receives interest payments. The obligations usually have a maturity of less than ninety days.

Domestic
Represents assets domiciled in South Africa.

International
Represents assets domiciled outside the Republic of South Africa.

8.3 Regulation 28

Regulation 28 of the Pension Funds Act defines the percentage limits that may be held in various classes of investment. The most significant aspects are:

- up to 75% in various fixed interest securities,
- up to 75% can be invested in preference and ordinary shares,
- up to 25% in property and property unit trusts,
- up to 30% in offshore investments, with additional 10% in Africa.
- up to 10% in commodities
- up to 15% in hedge funds and private equity.

The auditors have certified that the assets comply with Regulation 28 as at the valuation date.

8.4 Asset/liability matching at portfolio level

The investment policy of the Fund provides for a life stage model. We have consequently compared the members' liabilities against the assets in each investment portfolio as follows:

1 January 2022								
Allocation of member credits per investment channel	**Total**	**Growth Risk Profile**	**Conservative Risk Profile**	**Shari'ah Risk profile**	**Capital Protection Profile**	**Liberty Institutional Money Market Fund**	**Short Term Money Market**	**Liberty Insurance Policy and Risk**
Active members	4,555,276,900	4,369,194,500	31,391,200	64,237,600	90,392,400	13,100	48,100	-
Paid-Up	118,384,700	117,746,300	123,100	375,700	-	-	139,600	-
Pensioners	107,174,000	-	107,174,000	-	-	-	-	-
Cost Contingency Reserve	1,821,200	-	-	-	-	-		1,821,200
Benefits Payable	53,972,300	25,176,200	-	-	-	7,200	8,699,100	20,089,800
Unclaimed benefits	31,801,700	-	-	-	-	-	-	31,801,700
Net debtors and creditors	(15,675,800)	-	795,900	-	-	-	-	(16,471,700)
Net liabilities	**4,852,755,000**	**4,512,117,000**	**139,484,200**	**64,613,300**	**90,392,400**	**20,300**	**8,886,800**	**37,241,000**
Assets (including bank account)	4,838,050,800	4,498,977,200	138,745,300	64,510,100	82,907,400			52,910,800
Bank account	1,065,900	-	-	-	-	-	-	1,065,900
Total assets	**4,839,116,700**	**4,498,977,200**	**138,745,300**	**64,510,100**	**82,907,400**	**-**	**-**	**53,976,700**
Mismatch	(13,638,300)	(13,139,800)	(738,900)	(103,200)	(7,485,000)	(20,300)	(8,886,800)	16,735,700
Mismatch %	-0.28%	-0.29%	-0.53%	-0.16%	-9.03%	100.00%	100.00%	44.94%

There is a timing mismatch between some of the portfolios as the assets shown in the AFS do not match the assets per the investment managers statement due to the pricing lag. However, even after correcting for that mismatches are still evident in some of the portfolios.

The mismatch between the assets and liabilities can cause the fund to have a deficit as the returns allocated to members will be different from the underlying return earned on the assets. A process is required to align the reporting and to monitor this more closely in future.

8.5 Certificate of matching

An investigation of the investment strategy of the University of the Witwatersrand Retirement Fund was undertaken at the actuarial valuation of the Fund as at 1 January 2022.

I hereby certify that I am satisfied with the structure of the assets in general there is some mismatch between the assets and the liabilities. A process is required to monitor this more closely in the future.

Natasha Huggett-Henchie
BBusSc FIA FASSA CFP®
Valuator of the Fund

Appendix A: Summary of the benefit structure

1. Fund Rules

The benefits and contributions payable are stipulated in the Rules of the Fund. If the benefits and /or contributions summarised below, differ from those stipulated in the registered and approved Rules, the latter shall apply.

a. Fund Commencement and anniversary

The Fund commenced on 1 January 1995. The Fund anniversary is on **1 January** of each year.

b. Definition of Member Share

In respect of each member any compulsory amounts transferred into the Fund, plus contributions made by the member and the net employer contributions in respect of retirement benefits, plus the net monthly investment return.

c. Normal Retirement Age

65 years

d. Retirement benefits

Normal Retirement:
The member becomes entitled to the full Member Share at normal retirement age. The benefit shall be used to purchase an annuity from a registered insurer, subject to the member given written notice of the option to take the whole of the benefit in cash.

Early Retirement:
In the event that early retirement is permitted, the pension shall be paid from the member's actual date of retirement.

Late retirement
In the event that late retirement is permitted, the pension shall be paid from the member's actual date of retirement.

e. Death Benefits

Main pension

The benefit is a pension payable to the dependents as can be secured by the greater of:
a. A benefit equal to the member's share of fund
b. Twice the member's annual fund salary at date of death

Spouse benefit (Optional)

On the death of a member, the fund shall pay an annuity equal to 40% of 1/12th the member's fund salary to the spouse until the earlier of her date of death and the date the deceased member would have attained the age of :
a. 65 if the member who dies on or after 1 December 2004,
b. 60 if the member died prior to this date

This benefit shall be reduced by any annuity payable to the spouse by a former fund.

Child benefit (Compulsory)

On the death of a member, the fund shall pay an annuity equal to 20% of 1/12th of the member's fund salary in respect of each child as long as the child meets the child dependent requirements.

Subject to a max of 2 children per member

This benefit shall be reduced by any annuity payable to the spouse by a former fund.

The death benefit distribution is subject to section 37C of the Pension Funds Act.

f. Withdrawal benefits

Withdrawal benefit
A benefit equal to the member's share of fund.

Subject to the provisions in the Rules, the member may receive the benefit in cash or transfer the benefit to another approved fund.

g. Contributions

Member Contributions
The member contribution rates are as follows:

Employer's Contribution
23.5% of every member's pensionable fund salary (towards retirement funding) less the contributions and premiums paid in respect of any separate associated insurance schemes.

For members in receipt of a disability income, contributions shall be equal to the employer contribution.

Additional contribution (determined by the actuary) may be required in the cases where the employer has agreed to allow pensions to be paid from the fund.

2. Description of Fund Accounts

a. Member Share Account

The member share account is the sum of all the members' shares and is made up as shown below.

Funds paid into the account:

- contributions toward retirement;
- surplus from the member or employer surplus account;
- positive fund return.

Funds paid out of the account:

- benefits payable according to the rules of the Fund;
- negative fund return;

- transfers to the Cost Contingency Reserve;
- transfers to the Processing Error Reserve;
- costs payable from the members' shares according to the rules.

b. Cost Contingency Reserve

This reserve was set up for the prudent management of ad hoc expenses incurred by the Fund. The account may be credited with:

- transfers from the Member Share account to strengthen the account;
- contributions towards expenses;
- interest earned on late payment of benefits subject to a maximum as decided by the board;
- interest earned on the bank balance of the Fund;
- positive fund return.

The account may be debited with the following:

- tax and levy payments not allowed for by administration cost;
- fidelity and professional indemnity insurance premiums;
- consultancy fees;
- audit fees;
- secretarial fees;
- trustee expenses;
- any other costs;
- negative fund return.

c. Unclaimed Benefits Account

This account holds benefits payable to members which have remained unclaimed.

d. Pensioner Account

The account may be credited with:

- Transfers from the member fund account on the death of a member to cover the cost of the spouse's and children's benefits;
- amounts paid to the fund in respect of spouses' and children's benefits by the employer;
- positive adjustments from any of the contingency reserve accounts as the board, acting on the advice of the valuator, may decide;
- positive fund returns on the balance held in the account;
- positive adjustments to fund returns as a result of unallocated amounts,

The account may be debited with the following:

- pensions payable to qualifying spouses and qualifying children;
- The monthly fund expenses related to qualifying spouses and qualifying children;
- allocations to the contingency reserve accounts, as decided by the board on the advice of the valuator;
- negative fund returns on the balance held in the account;
- negative adjustments to fund returns as a result of unallocated amounts.

Appendix B: Pensioner valuation basis

B.1 Economic assumption

	1 January 2022	1 January 2019
Consumer Price Inflation	6.00% p.a.	5.50% p.a.
Pension increase allowance	6.00% p.a.	5.50% p.a.
Discount rate	9.25% p.a.	8.50% p.a.
Real discount rate post-retirement	3.1% p.a.	2.8% p.a.

B.2 Principles underlying the economic assumptions

B.2.1 Discount rate and general price inflation

Long-term prediction of the absolute level of these items is very difficult. However, the absolute value of these assumptions is less important than the relationship between them.

Our long-term inflation assumption is 6.00% per annum. This is derived from the implied difference between the real and nominal interest rates on bonds of appropriate duration for the liabilities. This implies a discount rate of 9.25% pa.

B.2.2 Pension Increases

As outlined in Section 5.4.2 the pension increase assumption should be set taking into account the pension increase strategy of the trustees and the reasonable benefit expectations of members.

The pension increase assumption has been set to 6.00% pa, or 100% of the underlying general inflation assumption of 6.00% pa, which reflects the above considerations. We have thus implicitly assumed a post-retirement interest rate of 3.25% pa net of tax for current and future pensioners.

B.3 Mortality assumption

We have assumed a nil pensioner mortality before the pension payments cease. It is also not necessary to make an assumption on post retirement mortality as the pension cease when the main member would have obtained normal retirement age.

B.4 Principles underlying the solvency margin basis

In setting the solvency margin, we reduced the gross interest rate by 0.5%, which is roughly the cost of implementing a matched strategy to purchase the liabilities from an insurer.

Appendix C: Data validation

1. Introduction

The quality of the results of an actuarial valuation is crucially dependent on the quality of the underlying valuation data. In terms of Standard of Actuarial Practise Note 201 issued by the Actuarial Society of South Africa, the actuary is required to:

- Inspect the quality of the data for accuracy and reasonability; and
- Provide a description of the measures taken to ensure the completeness and accuracy of all data used.

Its purpose is to ensure that the valuation report contains sufficient information to allow an adequate appreciation to be made of the financial condition of the Fund by the Trustees of the Fund, the sponsoring employers and the regulatory authority. This guidance note is mandatory for statutory valuations and best practice for other valuations.

In order for data to be of acceptable quality and accuracy it must be:

- Complete;
- Accurate;
- Up-to-date;
- Consistent with previous valuation data; and
- Sufficiently detailed, providing all information that is likely to be financially significant to the level or timing of future benefits.

It is required of the actuary to express his satisfaction with regards to the quality of the data or, if necessary, qualify any reservations regarding the reliability thereof.

2. Findings

The valuation has been based on all relevant data available at the time, in electronic format or otherwise. This data was obtained from the following sources:

- Liability data as supplied by the Fund's Administrator;
- Financial Statements and supporting schedules as provided by the Administrators of the Fund;
- Other relevant documents such as the Rules of the Fund, Minutes and previous valuation reports; and
- Other information supplied by various parties per telephone or email upon request.

In order to validate the data for this valuation, we have performed the following checks:

- We have compared the data against the data supplied for the previous valuation and have performed a reconciliation of the membership over the inter-valuation period.
- We have verified that there are no unusual values such as impossible dates of birth, retirement ages or start dates.
- We have compared the data against the data supplied for the previous valuation and have examined the reasonability in the changes in average age, average salary and average past service.
- We have compared the data against the Rules of the Fund in respect of contributions received and benefits paid. We were satisfied that the Rules of the Fund had been applied correctly.

- We have examined the interest factors used in the data to accumulate Members' Fund Credits for accuracy.
- We have independently calculated each individual accumulated Member's Share as at the valuation date, based on the interest allocated and contributions made over the valuation period, and compared it to the data supplied for accuracy.
- We have inspected the accumulated benefits for reasonability and consistency with the previous valuation.
- We have compared the data against the information supplied in the Financial Statements for consistency with respect to contributions paid (Employer), reinsurance premiums paid and fund expenses incurred.
- We have compared the data against the information supplied in the Financial Statements for consistency with respect to benefit payments (both benefits payable by the Fund and reinsured benefits payable by the Insurer) over the valuation period.
- We have investigated the assets held to determine whether they are matched to the liabilities for the various life stage categories in the Fund.
- We checked if the life staging switching was done appropriately.

We are satisfied that the level of detail of the data provided was sufficient in order for us to assess the quality and accuracy thereof for the purpose of this valuation.

Statement in terms of Regulation 20 of the Act

Giulia Tognon
The Registrar of Pension Funds
Financial Sector Conduct Authority
P O Box 35655
Menlo Park
0102

Dear Giulia

UNIVERSITY OF THE WITWATERSRAND RETIREMENT FUND (PF 12/8/31841)
STATEMENT IN TERMS OF REGULATION 20 OF THE ACT

We hereby attach the actuarial valuation report of the University of the Witwatersrand Retirement Fund as at 1 January 2022 a statutory submission as required in terms of Section 16(1) of the Act and Board Notice 149 of 2010.

The trustees have accepted the valuation at the meeting held on _______________. Furthermore, the trustees have noted the recommendations of the actuary.

We attach the certificate required in terms of Section 16(8) of the Act.

We have requested our actuaries to submit the report on our behalf.

Signed:

Digitally signed by Kgomotso Kasonkola Date: 2022.12.19 15:08:28 +02'00'	Digitally signed by Jeremy Gill Date: 2022.12.24 06:52:25 +02'00'	
Chairperson of Board	Principal Officer	Trustee
		23 December 2022
Date	Date	Date

Certificate in terms of Section 16(8) of the Pension Funds Act

University of the Witwatersrand Retirement Fund (12/8/31841)

Valuation as at 1 January 2022

In compliance with Section 16(8) of the Pension Funds Act, we hereby certify that:

To the best of our knowledge and belief, the information furnished to the valuator for the purposes of the report was correct and complete in every material respect.

and

A copy of the report or a summary thereof was sent to every employer participating in the fund (if applicable)
Delete and initial if not applicable.

Signed:

Digitally signed by Kgomotso Kasonkola Date: 2022.12.22 07:16:15 +02'00'	Digitally signed by Jeremy Gill Date: 2022.12.24 06:53:02 +02'00'	
Chairperson of Board	Principal Officer	Trustee
		23 December 2022
Date	Date	Date