UNIVERSITY OF CAPE TOWN RETIREMENT FUND

ACTUARIAL VALUATION REPORT AS AT 31 DECEMBER 2001

March 2003

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1. INTRODUCTION

The report sets out the results of the statutory valuation of the **University of Cape Town Retirement Fund** as at 31 December 2001. The previous statutory valuation of the Fund was conducted as at 31 December 2000.

The next statutory valuation of the Fund is due as at 31 December 2003. However, the Trustees have decided to comply with the requirements of the Pension Funds Second Amendment Act with effect from 31 December 2001. Accordingly the statutory valuation of the Fund was advanced to 31 December 2001.

Professional standards

This report has been prepared in my capacity as the appointed valuator to the Fund and as a Director of Fifth Quadrant Actuaries & Consultants.

The report has been prepared in accordance with the requirements of Regulation 15 of the Pension Funds Act and the Professional Guidance Note 201 issued by the Actuarial Society of South Africa.

2. PURPOSE OF THE VALUATION

The purpose of the statutory valuation is:

(i) To assess whether the Fund's assets are at least equal to the Member Accumulated Credits, the Transitional Retirement Reserves and pensioner liabilities as defined in the Fund rules.

(ii) The review the Employer contribution rate to ensure that it that is sufficient to finance the costs and benefits as provided for in the Fund rules.

(iii) To review the level of the General and Risk Reserves of the Fund.

(iv) Recommend changes to the Fund Rules to comply with the requirements of the Pension Funds Second Amendment Act 2001.

3. VALUATION INFORMATION

3.1 Data used in the valuation

The Fund's auditor does extensive checks on the data and as such we have relied on the information supplied in the audited annual financial statements.

We have done reasonability checks on the total of the member "Accumulated Credits", the member "Transitional Retirement Reserves" and the other Reserve Accounts of the Fund. We are satisfied that the results reflected below are materially correct.

A summary of the membership data upon which the valuation was based is given in Annexure I. The most notable features of the membership are:

(i) The number of in-service members has increased slightly from 2 324 at the last valuation to 2 333 members currently.

(ii) The number of deaths has increased from 2,5 deaths per 1 000 members per annum during the previous inter-valuation period (i.e. from 1 January 1998 to 31 December 2000) to some 3,9 deaths per 1 000 members.

Whilst the latest experience is over only one year, this continues the observed deteriorating trend. The number of deaths during the period 1 January 1995 to 31 December 1998 was 1,5 per 1 000 members.

The current experience still represents better mortality experience than the general population (where the rate is closer to 5 deaths per 1 000 members).

(iii) The increase in the number of pensioners from 10 at the last valuation to 15 at the current valuation. These pensioners are pensioners that elected a living annuity from the Fund.

3.2 Rule changes

The rules were reviewed and consolidated effective 1 July 2001. This consolidation had no impact on the financial position of the Fund.

A résumé of the present benefit structure is set out in Annexure II.

4. ASSETS OF THE FUND

The assets of the Fund backing member liabilities are invested in three portfolios, namely a cash portfolio, a Guaranteed Fund portfolio and a market-linked portfolio according to the member's choice. These portfolios are also known as Portfolio A, B and C respectively.

The Reserves of the Fund are invested partly in a "Guaranteed Fund" with Momentum Life (a legacy investment from the "Permanent Part Time Employees Provident Fund"), and partly in Portfolios A and C.

The assets of the Fund as at 31 December 2001 are set out below:

Investment manager	R'000
Prescient Investment Management	99 613
Money Market	53 960
RSA bonds	45 060
Other	593
Coronation Asset Management	202 667
RSA equities	135 825
International assets	60 540
Other	6 302
Metropolitan Life* (Guaranteed Fund)	271 567
Momentum Life (Guaranteed Fund)	857
SANLAM (Deposit Account)	9 832
Housing loans directly from Fund	6 271
Net current liabilities	(30 494)
Total	**560 312**

* The Guaranteed Fund policy includes non-vested bonuses of R29.6 million. This amount could be withdrawn (in part or full) by the Insurer in adverse market conditions subject to the insurer applying this to all participants in the Guaranteed Fund.

5. VALUATION RESULTS

5.1 Accrued position

The following table shows the valuation balance sheet as at 31 December 2001 and 31 December 2000 (the last valuation date).

	31.12.2000 R '000	31.12.2001 R '000
Liabilities		
Member Accumulated Credits (gross of housing loan balances)	423 362	492 372
Member Transitional Retirement Reserve*	40 317	39 341
Pensioner account	4 286	9 987
Risk Reserve	13 573	16 143
General Reserve	2 413	2 469
Total liabilities	483 951	560 312
Assets		
Assets at market value	483 951	560 312

* This represents the full value of the Transitional Retirement Reserve accounts. To the extent that members exit the Fund and are not paid their full Transitional Retirement Reserve in terms of the Fund rules, there will be a reversion of this amount to the Employer (as provided for in the rules).

5.2 Pensioners

All pensions arising from the Fund are purchased from an external insurer except where a member elects a living annuity from the Fund.

Accordingly, the only pensions payable from the Fund are those where members elect a living annuity from the Fund. The Fund has no obligations for pension increases in respect of such pensioners and the pensioner also takes on the mortality risk.

5.3 Asset / liability matching

The following table shows the extent to which the assets and liabilities of the Fund were matched as at 31 December 2001:

Investment channel	Liabilities R'000	Assets R'000
Cash portfolio	44 256	44 198
Metropolitan Life Guaranteed Fund	270 965	270 965
Market-linked portfolio	245 091	245 150
Total	**560 312**	**560 312**

Based on the analysis above, there is a slight mismatch between the market-linked portfolio and the cash portfolio. This difference reflects "timing" differences and the General Reserve of the Fund absorbs the financial implication thereof.

We are satisfied that the position is closely monitored and that the Fund has sufficient General Reserves to deal with such a small mismatch between the assets and member liabilities.

5.4 General Reserve

The General Reserve is a contingency reserve set up in accordance with the Rules of the Fund.

This Reserve Account includes two important items, namely:

- An amount of R103 124 in respect of reversions of the Transitional Retirement Reserve in the event of member exits. In terms of Rule 8.2(3), the Employer is entitled to take a contribution "holiday" to the extent of this amount.

- An amount of R692 181, which represents the UCT component of retirement saving contributions that were not paid to former members on exit including fund interest from date of exit to 31 December 2001.

  Up until 1 October 1997 a vesting scale applied to resignations. In terms of this vesting scale, members received 20% of the deemed Employer Account for each year of service with the full Employer Account being paid out after 5 or more years' service. Service completed under the AIPF counted as service under the UCTRF.

The remainder of the General Reserve of R1 673 378 represents a contingency reserve against future fluctuations in administration expenses, bank charges, fidelity insurance, the auditor's fees, RSC and FSB levies, the secretarial fees and other miscellaneous expenses.

The amount of the remainder represents some 0,64% of pensionable salaries, which is some 87% of the current annual fund expenses of 0,74%. It is 0.3% of the total market value of the Fund's assets.

In our opinion this represents a reasonable level for this Reserve Account and we recommend that this level of reserve be retained.

5.5 Risk Reserve

The Fund Rules require that if the cost of the risk benefits and other Fund costs exceed 6,5% of pensionable salary, the risk benefits must be reduced.

The current contribution rate for risk benefits and costs is significantly below this threshold. However, the Fund has experienced a trend of worsening claims experience and the associated increase in the cost of risk benefits.

The Risk Reserve (currently some R16.1m) has been set up as a buffer against adverse mortality (and disability) experience, particularly arising from HIV / AIDS. This reserve was built up using the excess of the employer contribution designated for risk benefits over the actual cost of the risk benefits up till July 1997 (see financial history of the Fund –see section 6).

The purpose of the Risk Reserve is to avoid a reduction in the current risk benefit levels for as long as possible in the event that the "cap" of 6.5% of pensionable salary is breached. Ideally the Trustees would like the Risk Reserve to be sufficient to maintain the current risk benefits under all mortality and morbidity scenarios, although clearly this cannot be guaranteed.

In order to prevent the Risk Reserve building-up excessively, we have certified (on an annual basis since July 1997) that member's may be credited with additional retirement saving contributions. Currently this additional contribution is 3.25% of pensionable salary for permanent staff and 2.172% of pensionable salary for fixed term contract staff.

One could argue that the quantum of the Risk Reserve should be determined on a more scientific basis than the historical build-up of this account. The counter arguments are:

- It was prudent financial management to build-up the Risk Reserve at the outset of the Fund. Since July 1997 members have been credited with additional retirement savings as it became clear that the Risk Reserve was reaching a satisfactory level. The Fund thus followed a specific practice in building the Risk Reserve.

- Whilst statistical models can be used to estimate the incidence of AIDS deaths, there is a large random factor in that senior staff at the UCT Medical School have additional exposure to the risk of contracting HIV accidentally.

Many of these senior staff have large death and disability cover and if a few of the members were to contract HIV accidentally, it would have a material adverse impact on the cost of the risk benefits.

Other UCT staff are exposed to other risks (for example biological and nuclear) on account of their particular educational discipline.

- Even though the Fund Rules provide for a reduction in risk benefits should the premium rate and Fund costs exceed 6.5% of pensionable salary, the Trustees would like to avoid such a reduction if possible.

  Holding a higher Risk Reserve clearly increases the chances of being able to achieve this objective.

On the basis of the above and in line with past practice, we are satisfied to recommend that the Risk Reserve be maintained at its current level of R16.1 million.

5.6 Employer contribution rate

The total employer contribution rate to the Fund and related schemes (i.e. the disability income benefit and the separate Group Life Assurance arrangement) differs for Permanent Staff (22,5% of salary bill) and Fixed Term Contract members (20,912% of salary bill).

Currently the employer contribution is allocated as follows:

	Permanent staff	Fixed Term Contract Staff
Retirement saving (in terms of Fund rules)	16,00%	16,000%
Additional retirement savings bonus	3,25%	2,172%
Insured death-in-service benefits from Fund (allows for 6 x annual pensionable salary for all members)	1,09%	-
Disability income benefits*	0,62%	-
Separate Group Life Assurance scheme*	0,60%	1,800%
Administration fee	0,28%	0,280%
Other expenses (Audit, Actuarial, Consulting, Secretarial)	0,66%	0,660%
Total	**22,50%**	**20,912%**

* These arrangements are outside the Fund.

We recommend that the additional retirement savings bonus shown in the above table continue for the period up to 1 April 2002 at which stage it should be reviewed in line with any changes in the costs of risk benefits.

6. ANALYSIS OF FINANCIAL HISTORY OF FUND

The UCT Retirement Fund was established with effect from 1 January 1995 when employees of the University had the option to transfer from the Associated Institutions Pension Fund (AIPF) to the Fund.

As part of the transfer process, by negotiation between UCT and the representative trade unions, UCT funded a Transitional Retirement Reserve (TRR). A TRR was calculated for all transferring members (for younger members the TRR was nil) and credited to the transferring member's TRR Account.

The Fund Rules provide that in certain circumstances the TRR is not paid out in full (e.g. on resignation prior to age 50). Rule 8.2(3) specifically provides that any TRR not paid out would revert to UCT. The University could use such reversions to finance a contribution holiday. As highlighted in section 5.4 above, there is an amount of R103 124 available as at 31 December 2001 for UCT to finance a contribution holiday.

6.1 Nature of the Fund

The Fund is a pure defined contribution arrangement. Since inception members were credited with the full investment return earned on the underlying assets (net of Retirement Fund Tax and investment manager fees).

The employer contribution rate to the Fund was negotiated between UCT and the representative trade unions. The Rules specify that a minimum of 16% of pensionable salary should be allocated as retirement savings. Furthermore in the event that the risk benefits of the Fund and associated schemes and expenses exceed 6.5% of pensionable salary, these risk benefits must be reduced.

On the basis of the above there is a strong case for arguing that the only beneficiaries of the normal on-going contributions paid by UCT should be the members. (As provided for in the Fund Rules, UCT is the beneficiary of any reversion in respect of the special once-off contribution to finance the TRR.)

6.2 Analysis of General Reserve

As highlighted in section 5.4 above the General Reserve includes an amount of R103 124 in respect of TRR reversions (due to UCT) and R692 181 in respect of retirement savings contributions withheld on resignation because a vesting scale applied. (The R692 181 includes investment returns from date of exit up to 31 December 2001.)

The balance of the General Reserve was built-up by slightly over-providing for costs. As at 31 December 2001 the net balance in the General Reserve Account is R1 673 378

6.3 Analysis of Risk Reserve

The UCTRF commenced on 1 January 1995. At the commencement date the cost of the risk benefits (including the separate schemes) and expenses was some 5.1% of pensionable salary. Given that the Fund was newly established, the Trustees decided to use the margin in the contribution rate (i.e. 1.4% of pensionable salary) to build-up a contingency reserve in the Fund.

By 31 December 1997 (the first statutory valuation date of the Fund), the cost of the risk benefits and expenses had reduced to some 3.25% of pensionable salary. The Risk Reserve amounted to some R7.2 million at this date.

The Trustees took the first step in crediting members with additional retirement savings when, with effect from 1 July 1997 to 31 December 1997, members were credited with an additional retirement savings of 1.5% of pensionable salary.

As at 31 December 1997 there was still a substantial margin of 1.75% between the limit (6.5%) and the cost plus additional retirement savings (3.25% + 1.5%). On this basis the Trustees decided to increase the additional retirement savings to 2% of pensionable salary from 1 January 1998 until 31 March 1999.

By March 1999 the Risk Reserve had reached a level of some R12.2 million and the Trustees decided to cease further contributions to the Risk Reserve.

The additional retirement savings credited to permanent staff and the small balance in the contribution rate allocated to the General Reserve since April 1999 are in the table below:

Period	Risk benefit and expenses contribution	Margin (6.5% less cost)	Additional retirement savings credit	Balance to General Reserve
1/4/1999 to 31/3/2000	2.66%	3.84%	3.75%	0.09%
1/4/2000 to 31/3/2001	3.14%	3.36%	3.25%	0.11%
1/4/2001 to 31/3/2002	3.19%	3.31%	3.25%	0.06%
1/4/2002 to 31/3/2003	3.25%	3.25%	3.25%	0%

(Note: fixed contract staff have a lower contribution structure and the additional retirement savings currently credited to these staff is 2,172% of pensionable salary).

It is easy to draw the conclusion that the Risk Reserve was built-up by the excess contributions for risk benefits and expenses up to 31 March 1999. The bulk of the funding happened in the period 1 January 1995 to 31 December 1997.

6.4 Improper use

At no time since the inception of the Fund has there been improper use of the surplus by UCT.

6.5 Claims of former members

Since 1 October 1997, the Fund rules have provided an exit benefit that is at least equivalent is the "minimum individual reserve" as defined in section 14B(1) of the Pension Funds Act.

The General Reserve includes an amount of R692 181 in respect of retirement savings contributions withheld on resignation because a 5-year vesting scale applied. (The R692 181 includes investment returns from date of exit up to 31 December 2001.) Payment of this amount to these former members would ensure that the Fund meets the requirements of section 15B(5) of the Pension Funds Act in respect of minimum benefits to former members.

7. APPORTIONMENT OF SURPLUS

7.1 Current position

Although we have shown a nil surplus as at 31 December 2001, it would be appropriate to post the amounts due to UCT and to former members currently included in the General Reserve Account to an Employer Surplus Account and Member Surplus Account respectively.

On this basis the revised financial position of the Fund as at 31 December 2001 would be:

	31.12.2001 R '000
Liabilities	
Member Accumulated Credits (gross of housing loan balances)	492 372
Member Transitional Retirement Reserve*	39 341
Pensioner account	9 987
Risk Reserve	16 143
Member Surplus Account	692
Employer Surplus	103
General Reserve	1 674
Total liabilities	560 312
Assets	
Assets at market value	560 312

We recommend that Member Surplus Account be allocated in full to meet the claims of former members.

7.2 Allocation of future surplus

A surplus may emerge in future if the incidence of HIV / AIDS in the Fund is of such an extent that the Risk Reserve is not fully utilized.

We recommend that the Trustees do not make a decision regarding the treatment of such future surplus at this time. Such a decision gives the Trustees the maximum flexibility to manage the future financial position of the Fund.

For example, the Trustees are considering allowing retirees the option of a life annuity from the Fund – in time if a surplus were to be released from the Risk Reserve, this may be allocated as a contingency reserve against improvements in pensioner mortality.

8. MINIMUM BENEFITS

The current Rules of the Fund already provide for the minimum benefits as described in section 14B of the Pension Funds Second Amendment Act.

Two important points are highlighted:

- The Fund will not describe a minimum pension increase policy as provided for in terms of section 14B (3) of this Act as the Fund pensioners currently are living annuitants.

- The Trustees have decided not to pay a proportionate share of the General Reserve and Risk Reserve on exit as these reserves represent contingency reserves against higher mortality and expense experience. (The Trustees need to exercise discretion here as set out in section 14B(2)(b) of the Act.)

  The basis for this decision is that the need for the contingency reserves is not reduced in a Fund that is open to new entrants when an individual member exits. The decision will be reviewed in the event of a transfer of a large proportion of the membership.

9. SUMMARY AND CONCLUSION

The Fund is in a sound financial position as at 31 December 2001.

Our recommendations are:

- An amount of R692 181 should be allocated from the General Reserve Account to Member Surplus Account. This amount should then be utilised to settle the claims of former members that exited the Fund will less than the full share of the UCT retirement saving contribution.

- An amount of R103 124 should be allocated from the General Reserve Account to Employer Surplus Account. UCT can access this amount via a contribution holiday.

- The Risk Reserve should be maintained at its current level of R16.1 million. This reserve should in future only increase with investment returns and the difference between 6.5% of pensionable salary and the cost of the risk benefits and expenses should be allocated to members as additional retirement savings

- Permanent members should be credited with an additional 3.25% of pensionable salary retirement savings up to 31 March 2003 (i.e. the next risk benefit premium review date). This reflects the fact that the cost of the risk benefits and expenses is well below the threshold of 6.5% of pensionable salary defined in the Fund Rules. (The additional contribution for fixed contract employees should be 2.172% of pensionable salary up to 31 March 2003).

- The Trustees decision not to pay a proportionate share of the General Reserve and Risk Reserve on exit is appropriate since these reserves represent contingency reserves against higher mortality and expense experience.

- In order to give the Trustees maximum flexibility to manage the Fund going forward, the Rules should not be amended at this time to set out the ownership of any surplus that may emerge in the future.

Based on the current benefit and membership structures, I certify that the Fund will remain financially sound until the next triennial valuation.

A. Lester, B.Sc.,
Fellow of the Institute of Actuaries

In my capacity as a Director of
Fifth Quadrant Actuaries & Consultants

fifth quadrant

ANNEXURE I – MEMBERSHIP STATISTICS

Number of members

Active members

	01/01/1998 to 31/12/2000	01/01/2001 to 31/12/2001
Opening membership	2 442	2 324
+ New entrants	847	237
- Transfers out	(78)	16
- Retirements	(257)	66
- Deaths	(18)	9
- Resignations	(610)	137
- Other [(1)]	(2)	-
Closing membership	2 324	2 333

Notes:

(1) This relates to 2 members that were incorrectly included in the 1998 and 2000 membership.

Pensioners

	01/01/1998 to 31/12/2000	01/01/2001 to 31/12/2001
Opening membership	1	10
+ Retirements	9	5
Closing membership	10*	15

* This figure differs to that shown in the financial statements. The Administrator has advised us that 10 are the correct number of pensioners at the valuation date.

Total annual pensionable salaries (R'000)

	Total
31.12.2000	236 398
31.12.2001	260 329

ANNEXURE II – PRESENT BENEFIT STRUCTURE

The following is only a summary of the key provisions in the Fund Rules.

ELIGIBILITY CONDITIONS

All full time and employees are required to join the Fund.

NORMAL RETIREMENT AGE

60, or such age specified in the member's conditions of service.

PENSIONABLE SERVICE

Membership of the Fund plus service granted in respect of additional employer contributions, plus service under the AIPF.

TRANSITIONAL RETIREMENT RESERVE

An amount calculated at the inception date of the Fund (1 January 1995) for members transferring from the AIPF. This reserve accumulates with investment returns and is payable in accordance with the rules a described below.

RETIREMENT BENEFITS

(i) Normal and early retirement

On retirement after the attainment of age 55, a pension secured by the Member’s Accumulated Credit and the full Transitional Retirement Reserve. A member may elect to commute part of, or the entire amount of, his/her retirement benefit and receive a lump sum benefit.

(ii) Ill health retirement

A member may retire early at any age if early retirement is the result of ill health. The benefit is calculated as per early retirement.

FORM OF PENSION BENEFIT

All life pensions must be purchased from an Insurer in terms of the provisions of GN18 (i.e. the policy will be issued in the name of the retiree). The member may elect to receive a “living annuity” from the Fund.

DEATH BEFORE RETIREMENT

(i) Member's with less than 10 year's service

A pension secured by a benefit equal to:

1) 6 times annual pensionable salary; **plus**
2) The member's Accumulated Credit and Transitional Retirement Reserve

(ii) Member's with 10 year's service or more

The member may choose the level of death-in-service benefits payable within the following limits:

Minimum cover at time of election

A pension secured by a benefit equal to 4 times annual salary taking into account the member's Accumulated Credit and Transitional Retirement Reserve.

Maximum cover

A pension secured by a benefit equal to:

1) 6 times annual pensionable salary; **plus**
2) The member's Accumulated Credit and Transitional Retirement Reserve

A member may, on an annual basis, choose the level of cover they require within these limits. Once a member has elected to reduce his/her cover, he/she may only increase it again with the consent of the Trustees and subject to providing evidence of good health.

Should the member elect to be covered for less than the maximum cover, an additional contribution as determined by the Trustees in consultation with the Actuary will be credited to the member's Accumulated Credit.

The member's beneficiaries may elect (subject to taking financial advice) to receive the death benefit (or part thereof) in the form of a lump sum.

WITHDRAWAL BENEFIT

a) Voluntary withdrawal

A refund of the member's Accumulated Credit

PLUS

If the member is aged 50 years or older at the date of withdrawal, the Transitional Retirement Reserve

b) Retrenchment / Redundancy

The member's Accumulated Credit and Transitional Retirement Reserve will be payable.

EMPLOYER CONTRIBUTION

The Employer contributes at a rate of 16,0% of annual pensionable salary in respect of retirement benefits, plus a further amount of 6,5% (4.912% for fixed term contract employees) of annual pensionable salary payable in respect of death-in-service benefits and expenses and the separate disability income benefit and Group Life Assurance arrangements.

ANNEXURE III - VALUATION METHOD AND BASIS

Assets

The assets have been taken into account at full market value as the members are credited with the full investment return (net of tax and fees) earned on the underlying assets.

Liabilities

The liabilities are taken as the total of the member's accumulated credits as at 31 December 2001.

The Transitional Retirement Reserve has also been valued as the full balance in the members' transitional retirement reserve accounts as at 31 December 2001. To the extent that members exit the Fund and are not paid their full Transitional Retirement Reserve in terms of the Fund Rules, there will be a reversion of this amount to the Employer (as provided for in the rules).

The Risk Reserve and General Reserve Accounts have been set at their accounting balances.