



Strathclyde Pension Fund (No 3 Fund)

Actuarial Valuation as at 31 March 2005

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March 2006

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Executive Summary

This report sets out the results of our actuarial valuation of the Strathclyde Pension Fund (Number 3 Fund) as at 31 March 2005 and is addressed to Glasgow City Council as administering authority to the Fund. It has been prepared in accordance with the Funding Strategy Statement.

The main conclusions are as follows:

- The funding level (ratio of assets to past service liabilities) as at 31 March 2005 is 86% corresponding to a past service deficit of £12.4m. The funding level was 98% as at 31 March 2002, and the deficit was then £1.8m.
- The employer's share of the cost of future service benefits (i.e. ignoring any past service deficit) is 23.8% of pensionable pay (equivalent to 460% of employee contributions). This has increased from 20.6% of pay as at 31 March 2002 (equivalent to 400% of employee contributions).
- Our valuation for the purposes of setting employer contribution rates (the "ongoing valuation") anticipates an element of expected future returns from equities only in respect of pre-retirement liabilities. Without anticipating this future equity out-performance of the Fund assets relative to gilt yields, the corresponding result would be a funding level of 76% and a future service rate of 27.1% of pay (equivalent to 550% of employee contributions).
- The valuation results are based on a set of mortality assumptions which make an allowance for the expected future improvements in life expectancy of non-pensioner members.
- Assuming that a funding level of 100% is to be targeted over a period equal to the expected remaining working lifetime of employees (7.1 years) on the ongoing basis and that our assumptions are borne out in practice, a series of deficit recovery contributions starting with an initial payment of £1.9m per annum (increasing at the rate of 4.4% per annum) would be required in each of the next 7 years.
- The actual contribution rates will be phased in over three years as shown in our certificate. The *minimum* contributions to be paid by the employer from 1 April 2006 to 31 March 2009 are shown in our Rates and Adjustments Certificate in Appendix G. The employer may make voluntary additional contributions, for example, to recover the shortfall over a shorter period than the maximum permitted.
- In addition to the minimum contribution rates set out in the Rates and Adjustments Certificate, the employer is also required to make additional payments in respect of unreduced early retirements as and when they arise.

We would be pleased to discuss any aspect of this report with the Administering Authority.



Alison Murray FFA
30 March 2006



Ronald S Bowie FFA



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1. Introduction

- 1.1 We have carried out an actuarial valuation of the Number 3 Fund (“the Fund”) as at 31 March 2005 and have pleasure in presenting our report to Glasgow City Council (“the Administering Authority”) as the administering authority to the Fund.
- 1.2 The Number 3 Fund was established in the early 1990s as a sub-fund of the Strathclyde Pension Fund. It is an “admission agreement fund” as defined within Regulation 74 if the Local Government Pension Scheme (Scotland) Regulations 1998 (“the Regulations”). First Glasgow is the only employer in the Number 3 Fund and no new entrants have been admitted since the sub-fund was first established.
- 1.3 The previous valuation was carried out as at 31 March 2002 by Hymans Robertson and the results were set out in our report dated February 2003. These results are summarised in the table below for reference.

2002 Results Summary	£m
Value of Accrued (Past Service) Liabilities	
Employee Members	35.3
Deferred Pensioners	7.0
Pensioners	31.0
Total Accrued Liabilities (L)	73.3
Value of Fund Assets (A)	71.5
Surplus/(Deficit)	(1.8)
Funding Level [(A)/(L)]	98%
Employer Contributions	% of pay
(a) Future Service Funding Rate	20.6%
(b) Past Service Adjustment	3.1%
Total Common Contribution Rate [(a)+(b)]	23.7%

- 1.4 Employer contributions were 17.7% of pensionable pay in 2002/03. Contribution increases were phased in such that the rate payable for 2003/04 was 19% of pay and for 2004/05 20.6% of pay. Additional contributions were recommended to be paid into the Fund to recover the deficit and also to cover the costs of early retirements as and when they arose.
- 1.5 The Fund is part of the Local Government Pension Scheme (LGPS) which is a multi-employer defined benefit pension scheme. It is contracted out of the State Second Pension. Employees’ contributions are fixed (mostly at the level of 5% of pay for the members of the Fund). The Employer pays the balance of the cost of the scheme. The *actual* cost will not be known until the final pensioner dies, and employer contributions are set to meet the *expected* cost of the benefits. The employer contributions are reviewed at a series of three yearly valuation exercises. This valuation is one of the series.



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Purposes of Valuation

- 1.6 The main purposes of this valuation are:
- to review the financial position of the Fund against the Administering Authority's funding objectives;
 - to enable completion of all relevant certificates and statements in connection with the Local Government Pension Scheme Regulations (Scotland) 1998 ("the Regulations"), and other relevant regulations; and
 - to comment on the circumstances that may give rise to future volatility in the funding level of the Fund or the employer's contributions.

Funding Objectives

- 1.7 The funding objectives have been set by the Administering Authority in consultation with the employer and are set out in the Funding Strategy Statement (FSS).
- 1.8 Our valuation is based on the following funding principles:
- building up assets to provide for new benefits of current employees as they are earned;
 - recovering any shortfall in assets relative to the value placed on accrued liabilities over the expected remaining working lifetime of current employee members;
 - ensuring that there are always sufficient assets to meet the benefits as they fall due for payment to members; and
 - allowing for the fact that no new employees will be admitted to the Fund and that the ultimate funding target is likely to be a fully funded position on a discontinuance basis.
- 1.9 The funding objectives differ from those in place at the previous valuation, in that the ongoing funding principles have been revised to take greater cognisance of the longer-term discontinuance position.

Regulatory Requirements

- 1.10 This valuation is carried out in accordance with Regulation 76 of the Regulations, which specifies that the Administering Authority must obtain:
- an actuarial valuation of the assets and liabilities of each of the Fund as at 31 March 1999 and every three years thereafter;
 - a report by an actuary; and
 - a rates and adjustments certificate.
- 1.11 Within the rates and adjustment certificate we are required to specify the employer's common contribution rate i.e. the rate which, in our opinion, would in theory be required to ensure the Fund's solvency over the longer-term.

The common contribution rate and adjustments for this valuation apply for each year of the period of three years beginning with 1 April 2006.



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- 1.12 Under the provisions of the Regulations, we are required to consider the following:
- the existing and prospective liabilities of the Fund;
 - the desirability of maintaining as nearly constant a rate as possible; and
 - the Administering Authority's Funding Strategy Statement.
- 1.13 The Fund must comply with Her Majesty's Revenue & Customs Surplus Test (see Section 5 of this report) where the objective is to remain below a prescribed maximum level of funding.

Use of Results

- 1.14 This report is provided solely for the purposes of the Administering Authority and the Fund employer to fulfil their and our statutory obligations. It should not be used for any other purpose. The liability figures contained in this report are not appropriate for employer FRS17 or other accounting purposes. This report should not be released or otherwise disclosed to any third party except as required by law or with our prior written consent, in which case it should be released in its entirety.
- 1.15 Neither we nor Hymans Robertson LLP accepts any liability to any other party unless we have expressly accepted such liability in writing.
- 1.16 This report has been prepared in accordance with version 7.0 of "Retirement Benefit Schemes - Actuarial Reports - GN9" published by the Institute of Actuaries and the Faculty of Actuaries. The following aspects of GN9 are not relevant to the current circumstances of the LGPS and hence our report does not comply with these aspects of GN9:
- Paragraph 2.5 of GN9 requires the actuary to state the Minimum Funding Requirement (MFR) funding level. As the MFR does not apply to the LGPS, this report does not comply with paragraph 2.5 of GN9.
 - Paragraph 2.6 of GN9 requires the actuary to report on the value of the liabilities that would arise had the Fund wound up on the valuation date (based on the cost of buying out the accrued benefits with insurance policies). As the LGPS is a statutory scheme, there is no regulatory provision for scheme wind up and the scheme members have a statutory right to their accrued benefits. Therefore the concept of solvency on a buy-out basis does not apply to the Fund. Accordingly, this report does not comply with paragraph 2.6 of GN9.
- 1.17 The Government's recent legislation relating to employers' obligations on the voluntary termination of their pension schemes, known as the Debt on Employer regulations, does not apply to the LGPS. The Government's new safety net system from April 2005, the Pension Protection Fund, also does not apply to the LGPS. We assume that the employer will be able to fulfil its obligations to pay contributions certified in this report.
- 1.18 The membership and accounting data was provided by the Administering Authority as part of the formal valuation exercise for the principal Strathclyde Pension Fund (the Number 1 Fund).
- 1.19 As for the previous formal valuation in 2002, we have extracted the membership data for the Number 3 Fund from the membership data in respect of Strathclyde Buses, which was a former employer in the Number 1 Fund. In doing so, we have assumed that members who were in service on 18 February 1993 (the effective date of de-regulation) transferred to First



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Glasgow and therefore participate in the Number 3 Fund. We have assumed that those members who had already left pensionable service on that date are attributable to Strathclyde Buses and their liability is retained by the Number 1 Fund.

- 1.20 No membership data for the Number 3 Fund appears in the Annual Report and Accounts for the Strathclyde Pension Fund. As a result, we have not been able to independently verify the number of members attributable to the Number 3 Fund as at 31 March 2005. We have, however, compared the implied salary roll and pensioner payroll from the membership data with the accounting information. The employee contributions derived from the membership data were within 2% of the corresponding figure quoted in the audited accounts. In addition, we were able to reconcile the level of pensions paid over the year 2004/5 as suggested by the membership data to that quoted in the audited accounts, to within a tolerance of 1%.
- 1.21 We have no reason to doubt that the membership has been correctly attributed between the two employers, although the Administering Authority may wish to consider asking First Glasgow to confirm its agreement to the data to avoid any dispute at a later date.
- 1.22 Overall, we are satisfied that the data used in our calculations provides a sound platform for the valuation.



2. Fund and Benefit Information

Benefits and member contributions

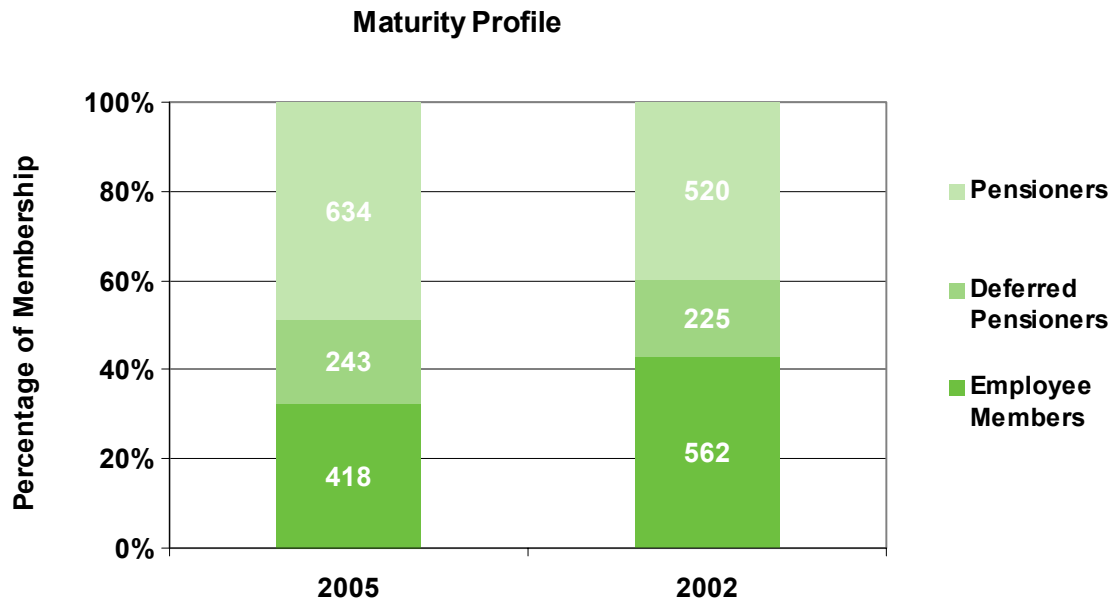
- 2.1 The principal elements of the benefit structure of the Fund are set out in the Regulations and are summarised in Appendix A.
- 2.2 There are a small number of discretionary powers, which may be exercised by the Administering Authority or the employer. The principal discretions are also summarised in Appendix A. With the exception of the employer's power to augment benefits (normally on early retirement) we would not expect that the exercise of these powers would have a material effect on the valuation results.
- 2.3 Although the main benefits affecting our calculations remain unchanged since the previous valuation, there have been a number of amendments to the Regulations, under the auspices of the Government's Stocktake review of the scheme. The changes are summarised in Appendix A. The changes already made do not materially affect the results of our valuation.
- 2.4 However, the Government has issued draft amending regulations that remove the Rule of 85 for service after October 2006 in England and Wales. Similar proposals are expected in Scotland. These could reduce the cost of future service benefits. No allowance has been made in this valuation for the abolition of the Rule of 85.
- 2.5 Most of the Fund's employee members contribute at the rate of 5% of pay as they are "manual" members who joined prior to 1998. Officer employees contribute at the rate of 6% of pay. The employer meets the balance of the cost of the scheme.

Fund membership

- 2.6 The membership of the Fund as at 31 March 2005 and changes since the previous valuation are summarised in Appendix B for each membership category.
- 2.7 The chart on the following page illustrates the change in the structure of the Fund's membership between 2002 and 2005.



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- 2.8 The change in the average ages of Fund members (weighted by salary or pension as appropriate) over the intervaluation period is shown in the table below.

Maturity Profile	2005	2002
Average Age (years):		
Employee Members	51.1	49.1
Deferred Pensioners	48.7	46.2
Pensioners	61.5	59.4
Average Age of Retirements over last 3 years	56.9	56.5
Ratio of Pension Roll to Salary Roll	40%	26%
Anticipated Future Remaining Working Lifetime (years)*	7.1	8.2

* This is reduced to allow for employee members leaving before normal retirement age e.g. with a deferred pension or on ill-health early retirement.

- 2.9 The above chart and table shows a degree of maturity since 2002, as would be expected from a closed fund. The increase in the average age of employees is important as this affects the assessed cost of future service liabilities as well as the past service liabilities (the assessed cost increases with age). As at 31 March 2005, roughly half the members were retired, with around one third still in active service. It is noticeable that the average age at retirement is still well under age 60, principally as a result of the high number of ill-health early retirements.
- 2.10 The average age at death for pensioners has increased by two years. This trend may be expected to continue as the pensioner membership matures.

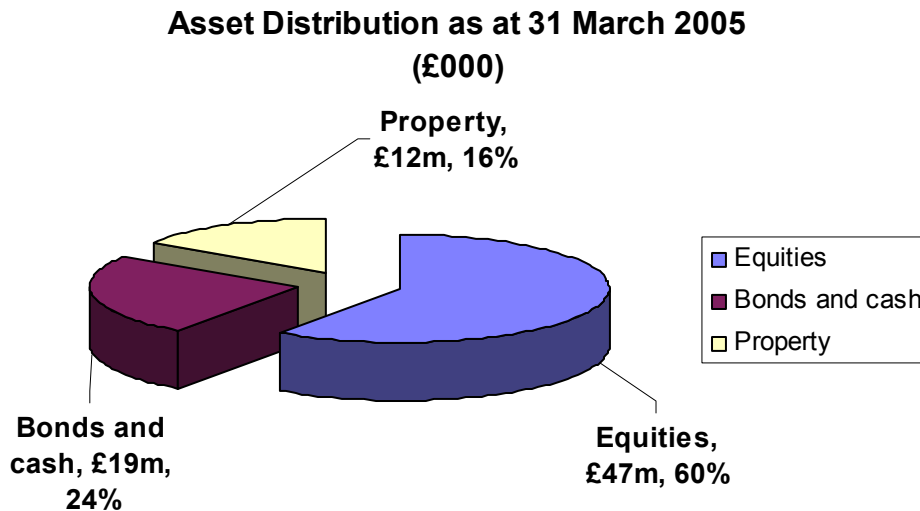
Fund assets

- 2.11 The Administering Authority has provided copies of the audited accounts for the Fund for each of the three years from 1 April 2002. The consolidated Revenue Account is shown in Appendix C, together with our estimates of the implied return on the Fund assets in each of the three years calculated from the change in the market value of assets and net annual cashflows to the Fund.



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2.12 The Fund's assets are invested by the Administering Authority. The market value of assets as at 31 March 2005 was £78m¹. A simplified summary of the asset split is shown below. A more detailed breakdown of the Fund assets is provided in Appendix C.



2.13 The asset distribution shown above differs significantly from that which was in place at the previous formal valuation as at 31 March 2002. In particular, the proportion of the Fund's assets which are invested in equities has reduced from 70% at the previous valuation to 60% as at 31 March 2005. Conversely, the proportion of the Fund held in bonds has risen from around 13% to 21% of the total market value. These changes reflect the implementation of a more defensive investment strategy. Whilst this may reduce the risk facing the Fund from volatility in equity markets by ensuring a greater degree of matching between the liabilities of the Fund and the assets held to meet them, this may come at the cost of lower expected returns.

¹ excluding defined contribution AVC funds



3. Method and Assumptions for 2005 Valuation

Methodology

- 3.1 For this valuation, as for the previous valuation, we have adopted an approach that considers separately the benefits in respect of service completed before the valuation date (past service) and benefits in respect of service expected to be completed after the valuation date (future service). This approach enables us to focus on two results:
- The *past service funding level* of the Fund. This is the ratio of the value of the assets to the value of the past service liabilities, after making allowance for future increases to members' pay. A funding level in excess of 100% indicates a *surplus* of assets over liabilities and a funding level of less than 100% indicates a *deficit*.
 - The *future service funding rate* i.e. the level of contributions required from the employers to support the cost of benefits for future service.
- 3.2 As for the previous valuation we have adopted the *attained age method*. This method anticipates the ageing of the employee members and effectively means that the contribution rate is derived as the average cost of benefits accruing to employee members over the period until they die, leave the Fund or retire. This is appropriate since the employer is closed to new entrants. A description of this method is set out in Appendix D.

Actuarial Assumptions

- 3.3 In our valuation, we must make assumptions about the factors affecting the Fund's finances such as inflation, pay increases, investment returns, how long members will live, staff turnover etc in order to place a value on the liabilities.
- 3.4 The future level of pay increases will determine the level of benefits to be paid in future in respect of active members and the contributions received by the Fund. Once in payment, pension benefits are increased annually in line with the headline RPI index².
- 3.5 The cost of providing benefits depends not only upon the amount but also the *incidence* of benefits paid i.e. at what point in the future benefits begin to be paid and for how long they continue to be paid.
- 3.6 As contributions are being invested now to provide for benefits payable in the future (i.e. the benefits are being "pre-funded") part of the cost of providing the benefits can be met from investment returns achieved by the Fund's assets that build up from contributions. The higher the rate of return achieved by the assets, the lower the contribution requirement that has to be paid in future to meet the cost of the benefits.
- 3.7 The assumptions adopted at the valuation can therefore be considered as:-
- the demographic (or statistical) assumptions, which generally speaking are estimates of the likelihood of benefits and contributions being paid; and

² in line with the Pension (Increases) Act 1971, lower increases can apply to Guaranteed Minimum Pensions.

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- the financial assumptions such as future levels of inflation or salary increases which determine the amount of benefits and contributions payable. The assumed future rate of investment return is used to discount future benefits and contributions to obtain their current or present value.

3.8 The key assumptions have been discussed with the Administering Authority. A summary of the assumptions used is included in Appendix E.

Financial Assumptions

3.9 Since we have taken assets into account at their market value it is appropriate for us to take our lead from the market when setting the financial assumptions used to value the ongoing liabilities, to ensure consistency of the asset and liability valuation bases. The key financial assumptions are:

- future levels of price inflation;
- future levels of real pay increases; and
- the discount rate (investment return) that is applied to future cashflows to determine their present value³.

3.10 We understand that the Employer has entered into pay agreements with around 75% of its employee membership which will limit future pay increases to inflation. We have assumed that these agreements have been made in accordance with Regulation 12(5), which was deleted with effect from April 2005.

3.11 In common with the approach adopted at the previous formal valuation, we have assumed annual pay rises of 1.5% in excess of inflation for employees to whom the pay agreements do not apply. No real salary growth has been allowed for in respect of the remaining members. The 2002-2005 experience appears around 0.5% p.a. lower than this.

3.12 We have derived our discount rates as the expected future rates of investment return from the broad categories of assets held by the Fund. In deriving the pre-retirement discount rate we have considered what additional returns might reasonably be expected from the Fund's investments over and above the minimum risk rate of return on Government bonds.

3.13 We have agreed with the Administering Authority to anticipate long term outperformance from the Fund's equity investment of 2% a year (i.e. 2% per annum in excess of the return on Government bonds). Property is anticipated to outperform gilts by 1% a year and corporate bonds to outperform by 0.5% a year.

3.14 The derivation of the discount rates used at this valuation (and the previous valuation as at 31 March 2002) is shown in the table below.

³ At the previous valuation, we used the same discount rate for past and future liabilities. We have modified our approach at this valuation and have adopted different discount rates for employee and non-employee members.



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Derivation of Discount Rate	Mar 2005		Mar 2002	
	% p.a. Nominal	% p.a. Real	% p.a. Nominal	% p.a. Real
Minimum risk rate of return (fixed interest gilt yield)	4.7%	1.8%	4.9%	2.3%
Anticipated extra long-term return from:				
Equities	2.0%		1.6%	
Corporate Bonds	0.5%		0.5%	
Overall anticipated long-term return from:				
Equities	6.7%	3.8%	6.5%	3.9%
Bonds (100% corporates)	5.2%	2.1%	5.2%	2.6%
Discount rate (pre-retirement)	6.7%	3.8%	6.2%	3.6%
Discount rate (post-retirement)	5.2%	2.1%	6.2%	3.6%

The 2002 discount rate was calculated assuming 75% equities and 25% bonds (the latter being comprised of 60% corporates and 40% gilts).

In 2002, the additional long-term return from equities was 1.5% if calculated geometrically (i.e. $1.049 \times 1.015 - 1 = 6.5\%$).

"Real" figures are net of price inflation (calculated arithmetically).

- 3.15 A summary of the other key financial assumptions used for the purposes of this valuation are shown in the table below:

Inflation and Pay Growth	Mar 2005		Mar 2002	
	% p.a. Nominal	% p.a. Real	% p.a. Nominal	% p.a. Real
Pay Increases ¹	4.4%	1.5%	4.1%	1.5%
Price Inflation/Pension Increases	2.9%	-	2.6%	-

¹ For members not subject to the pay agreement limiting future increases to RPI.

Demographic Assumptions

- 3.16 We have recently carried out a major investigation into the demographic experience of Scottish LGPS pensioners and other demographic experience for English and Welsh funds. We have used the assumptions derived from this study for this valuation, adjusted where appropriate in line with the Fund's experience and the Administering Authority's funding strategy. Details of these are included in Appendix E. The assumptions adopted at the previous valuation are shown in the report on that valuation.
- 3.17 Our aim is that the demographic assumptions should be as close to best estimates as is practicable. (The *prudence* required under the Funding Strategy Statement is delivered by reducing the anticipated return from the Fund's equity investments.)
- 3.18 We assume that benefits are drawn from the earliest age that each individual can retire without a reduction to their pension and without requiring the consent of the employer. This is consistent with the strain factors used for redundancy or efficiency early retirements. If, in practice, retirement occurs later than the earliest age, the funding level will improve.



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- 3.19 Our analysis has indicated that different mortality assumptions are justified for pensioners who were formerly in manual jobs compared to those who were in officer posts. We have therefore adopted lower life expectancy assumptions for manual members than officer members in this valuation. This distinction is particularly important for this Fund, where the majority of members are manual workers (or former manual workers).
- 3.20 In light of recent evidence of quickening life expectancy improvements and with the agreement of the Administering Authority, we have made an allowance for expected future improvements in longevity after retirement. Consequently, our assumptions allow for mortality projected to calendar year 2015 for non-pensioners, in line with standard actuarial tables PMA92 and PFA92.
- 3.21 We have reduced our allowance for pre-retirement deaths for employee and deferred pensioner members. The ill-health early retirement assumptions have been amended to allow for the lower expected experience of part-time members. However, this will have no impact on First as it has no part-time members.
- 3.22 Taken together, the overall change to the demographic assumptions has resulted in a slight decrease to the value placed on the past service liabilities and a slight decrease to the assessed cost of future service benefits.

Comments on the Valuation Assumptions

- 3.23 There is a broad spectrum of potentially acceptable valuation assumptions.
- 3.24 In our opinion, the assumptions adopted for this valuation lead to an assessment of the financial position of the Fund and the long-term cost of providing the benefits for future service which falls into the more prudent half of the spectrum.
- 3.25 Expectations of future inflation (as implied by gilt markets) have risen since the 2002 valuation (from 2.6% a year to 2.9% a year). This leads to a higher cost of expected future benefits. The anticipated rate of return from Fund's assets described in section 3.12 leads to a slightly higher discount rate for non-pensioner members (relative to Government bonds) than in 2002. This reduces the values placed on the liabilities and the assessed cost of future service benefits.
- 3.26 However, in making allowance only for expected outperformance on corporate bonds in valuing post-retirement liabilities, the degree of prudence is higher for this valuation than the 2002 valuation.
- 3.27 The funding position will be volatile as our assumptions may not be borne out in practice. Section 6 describes how future valuation results may be affected if the actuarial assumptions are not borne out in practice. We recommend a programme of actively monitoring the developing funding position of the Fund and the potential impact on future employer contributions.

Assets

- 3.28 We have taken the assets of the Fund into account at their market value as indicated in the Fund accounts for the period ended 31 March 2005. This is consistent with the approach of valuing the liabilities by reference to spot market conditions on the valuation date.
- 3.29 The approach taken to valuing the Fund's assets has been changed since the previous valuation, where a smoothed market value was used.



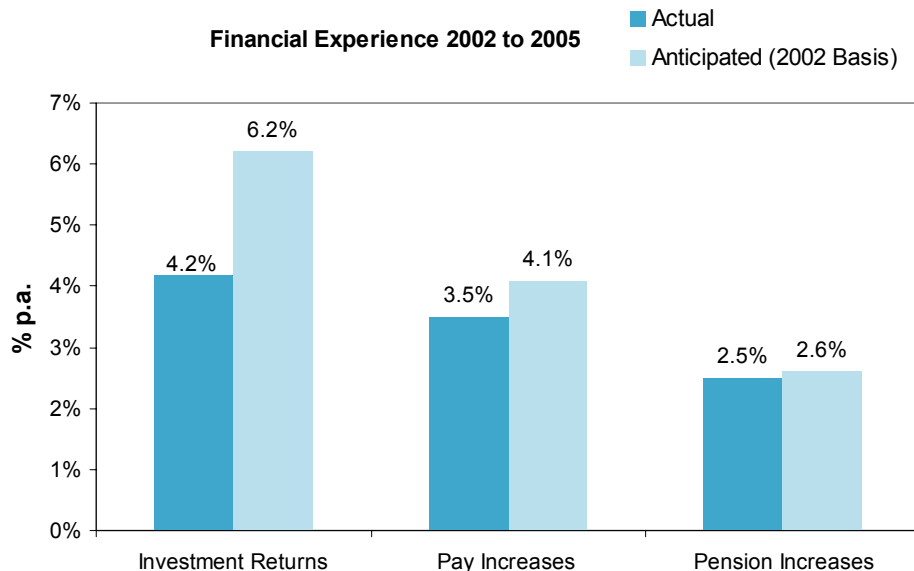
4. Experience since 2002

Results of 2002 Valuation

- 4.1 In the previous valuation of the Fund, the assets were valued at £71.5m and the past service liabilities on the ongoing basis amounted to £73.3m, equating to a funding level (ratio of assets to liabilities) of 98%.

Financial Experience

- 4.2 The chart below shows the actual financial experience of the Fund during the intervaluation period compared to the assumptions adopted at the 2002 valuation:



The figures for pay increases exclude any allowance for increments and promotional pay increases. These are included within separate promotional salary scale assumptions (see Appendix E).

- 4.3 The principal conclusions are:

- Investment under-performance relative to the anticipated returns built into the 2002 valuation of liabilities has had a major negative impact on the Fund.
- Nominal investment returns only averaged 4.2% a year over the three year period to 31 March 2005, and 1.7% a year in real terms. This was 1.9% a year less than that assumed at the 2002 valuation, leading to an expected reduction in the funding level on a like for like basis of around 6 percentage points for this factor alone.
- Pay increases over the intervaluation period were less than expected in both nominal and real terms. This factor has had a small positive impact on the Fund.
- Price inflation was relatively benign, with headline RPI only rising by 7.8%, or 2.5% a year.

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- 4.4 At the previous valuation, the employer share of the cost of future service benefits was calculated to be 400% of employee contributions. Employer contributions were stepped up to 400% of employee contributions by 1 April 2004, with additional amounts of £0.5m paid in light of the deficit in the Fund as at 31 March 2002.
- 4.5 Overall, the financial experience of the Fund during the intervaluation period compared to the assumptions adopted at this valuation has had a negative impact on the funding level.

Demographic Experience

- 4.6 The impact of the variation in experience relative to the demographic assumptions adopted at the previous valuation, taken as a whole, has been a positive factor for the Fund.

Employee Members

- 4.7 The table below shows the key items of experience for active members. The expected figures are based on our 2002 assumptions. (Our approach to setting the demographic assumptions for this valuation is explained in Section 3.)

	Actual	Anticipated	% Diff
Early Leavers	40	44	-9%
Deaths	1	7	-85%
Ill Health Retirements	45	32	39%
Early Retirements	9	-	

- 4.8 There were fewer employee members leaving the Fund with deferred benefits or a refund of contributions than anticipated by the 2002 valuation assumptions. This shortage of “withdrawals” has had a negative impact on the funding level, as the benefits for early leavers are linked to price inflation rather than salary inflation and hence have a lower assessed value.
- 4.9 The higher than expected number of ill-health early retirements will have a detrimental effect on the funding level relative to that in 2002.

Pensioner Mortality

- 4.10 Pensioner mortality was heavier than anticipated (more deaths/pensions ceasing) for all categories, with former manuals who retired on age grounds showing the heaviest experience. However, this has only had a small positive impact on the Fund, as evidenced by the graph on p19.
- 4.11 We did not differentiate between former manual and officer pensioners in the 2002 valuation. Following our mortality investigation across all of our Scottish LGPS clients, we have adopted different life expectancy assumptions for officer and manual pensioners in the 2005 valuation. In addition, we have also increased the differential between life expectancy for age retirements and ill-health early retirements. This will have a significant impact on the assessed value of the Fund’s liabilities given the proportion of manual members and ill-health pensioners. A comparison of the 2002 and 2005 assumptions for pensioners is shown in Appendix E.
- 4.12 In 2002, we made a small allowance for mortality improvements for non-pensioners. The results of this valuation continue to make some allowance for improvements in pensioner mortality, in line with the assumptions adopted for the No. 1 Fund.



5. Valuation Results

Past Service Position

- 5.1 One of the key funding objectives of the Fund, described in Section 3, is to build up sufficient assets to provide adequate security for members' benefits as they accrue: in other words, to target a funding level of at least 100%. The funding position as at 31 March 2005 is below this target, as shown in the table below.

Accrued (Past Service) Liabilities	£m
Value on minimum risk rate of return:	
Employee Members	43.9
Deferred Pensioners	13.0
Pensioners	46.0
(a) Total	102.9
<i>Less Credit for Anticipated Future Excess Returns:</i>	
Employee Members	(7.4)
Deferred Pensioners	(2.4)
Pensioners	(2.7)
(b) Total Credit for Anticipated Future Returns	(12.5)
Net Value after Credit for Future Excess Returns:	
Employee Members	36.5
Deferred Pensioners	10.6
Pensioners	43.3
(a)-(b) Total Net Liabilities	90.4
Assets	
Market Value of Assets	78.0
Contributions due for augmentations/redundancies	0.0
Total Value of Assets	78.0
Surplus (Deficit)	(12.4)
Funding Level	86.3%

- 5.2 It should be noted that the market value of both assets and liabilities may be volatile. The results of this valuation show only a snapshot of the funding level of the Fund as at 31 March 2005 and this result should be seen in the context of market levels before and since then.

**Strathclyde Pension Fund
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5.3 The past service funding level of the Fund has declined since the previous valuation. The main reasons for this are:

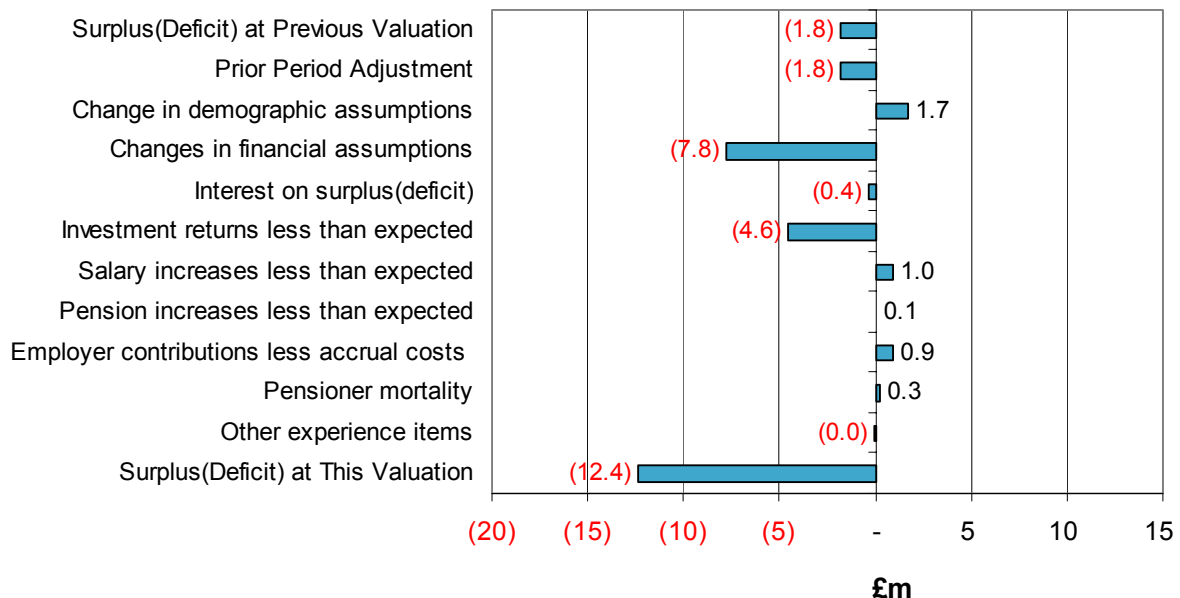
- the lower return on Fund assets over the period since the previous valuation relative to the rate required to keep pace with the liabilities;
- changes to the financial assumptions, and the fall in real gilt yields;
- an increase to the liabilities due to a revision of spouses' pension data since 2002;
- fewer numbers of early leavers than anticipated; and
- a greater number of ill-health retirements than anticipated.

These losses have been partially offset by:

- an increase in the allowance for asset out-performance relative to gilt yields;
- more deaths than anticipated;
- salary increases being less than expected; and
- the overall effect of changes to the demographic assumptions.

5.4 The net effect of the gains and losses listed above are summarised in the chart below.

Reconciliation of Opening and Closing Position



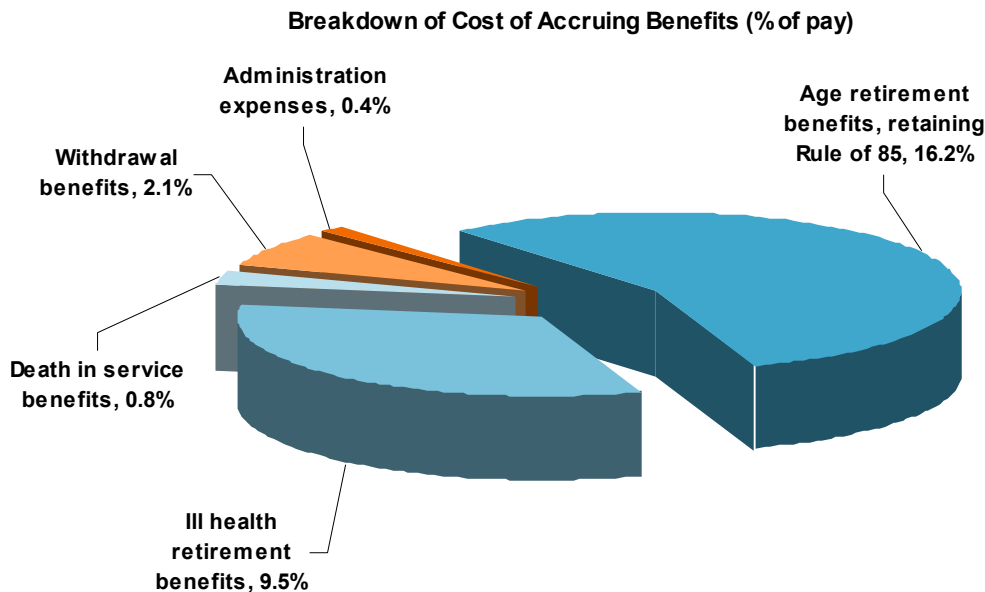
The "Prior Period Adjustment" takes account of the increase to the liabilities due to a revision of the spouses' pension data since 2002.



**Strathclyde Pension Fund
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Future service

- 5.5 We have calculated the employer's share of long-term future service contribution rate to be 23.8% of pensionable pay (equivalent to 460% of employees' contributions). This represents the average levels of contributions required, in excess of members' contributions, to provide for benefits accruing to existing employee members over the average remaining working lifetime following the valuation date. It includes an allowance for expenses and lump sum death in service benefits. It is the rate that would, if our assumptions were borne out, apply to service following the valuation date if there were no past service surplus or shortfall in the Fund.
- 5.6 This rate has been calculated using the Attained Age Method, which is appropriate for an employer that is closed to new entrants.
- 5.7 A split of the cost of future service benefits, *including members' contributions*, is shown in the chart below.



- 5.8 The employers' future service contribution rate of 23.8% of pensionable pay (equivalent to 460% of employee contributions) can be compared with the rate revealed by the previous valuation of 20.6% of pensionable pay (equivalent to 400% of employees' contributions). The higher rate revealed by this valuation is principally due to *net* effect of:
- the reduction in real gilt yields;
 - the increase on average age of employee members; and
 - the increased allowance for future longevity improvements;
- partially offset by
- changes to the pre-retirement demographic assumptions; and



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- a higher allowance for asset out-performance relative to gilts for pre-retirement liabilities.

Contributions payable

- 5.9 The common contribution rate payable is the cost of future benefit accrual, increased by an amount to bring the funding level back to 100% over a period equal to the remaining working lifetime of employee members (7.1 years) as set out in the Funding Strategy Statement. In order to achieve some stability of contributions, the required contribution increases may be phased in over a period of three years.
- 5.10 The employer common contribution rate based on the funding position as at 31 March 2005 is as follows:

Employer Contribution Rates	% pay
Future Service Funding Rate (Attained Age)	23.8%
Deficit Recovery Contributions (WLT)	£m p.a.
Increasing*	1.9

Deficit recovery contributions are based on a payment period of 7 years (equal to the remaining working lifetime of employee members).

* Payments increasing at 4.4% per annum.

- 5.11 The additional payments are per annum, although we would expect these to be payable monthly. We would have no objection to increasing payments being agreed as long as the Employer and the Administering Authority accept that deferring the re-payment of the deficit will lead to lower contributions in the short term but higher contributions overall in the longer-term.

Rule of 85

- 5.12 We have not anticipated any savings from the abolition of the Rule of 85, which may occur for service after October 2006. There would be no effect on the past service position. However, the future service rate could fall slightly if no transitional protection was provided. Given the uncertainty as to whether the benefit changes will be implemented and the current funding level being below 100%, it does not appear appropriate to anticipate such savings. In any event, if there is to be transitional protections in line with those proposed in England and Wales then First will get little benefit from the abolition of the Rule of 85.



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Her Majesty's Revenue & Customs Surplus Test

- 5.13 We have investigated the position of the Fund as at 31 March 2005 on the method and assumptions prescribed under legislation for controlling pension scheme surpluses. Our calculations reveal that the Fund did not have any "excessive" surplus as at 31 March 2005.
- 5.14 The Government has indicated its intention to remove the requirement for the Surplus Test with effect from 6 April 2006.



6. Influences on Future Funding

- 6.1 The Funding Strategy Statement provides a framework for the Administering Authority to assess its funding risks. The figures and comments in this section are intended to help put the valuation results shown in Section 5, which are critically dependent on the actuarial assumptions (described in Section 3), into context. Results of future valuations will also depend on the assumptions made at those times. Over time, the funding position and the contributions required will vary depending on actual future experience and whether this matches the assumptions made. This section discusses the potential implications of the actuarial assumptions not being borne out in the future.
- 6.2 Whilst the decision to allow the employer to phase in contribution rates over a period of up to three years help to achieve a degree of stability of employer contributions in the short-term, it could lead to less stable (higher) employer contributions in the future.
- 6.3 The results of future valuations will depend on the assumptions made at those times. Over time, the funding position and the contributions required will vary depending on actual future experience and whether this matches the assumptions made. This section discusses the potential implications of the actuarial assumptions not being borne out in the future.
- 6.4 The assumption to which the valuation results are most sensitive is that relating to future investment returns (the discount rate), particularly if the Fund's investment strategy is not a close match for the liabilities. Another key assumption to which the valuation results are particularly sensitive is that relating to future mortality, or longevity. The effects of future unexpected changes in mortality, and of other risks and sensitivities, are discussed later in this section.

Investment strategy

- 6.5 A defined benefit pension promise, being a promise to pay an income to a member in retirement, is analogous to a bond, which is an obligation to pay an income to the investor (plus repayment of capital).
- 6.6 Thus for the LGPS the investments that most closely match the liabilities are long-dated index-linked bonds. By "matched" we mean that the financial influences that affect the asset value have a similar effect on the liabilities.
- 6.7 The Administering Authority has adopted an investment strategy that includes broadly 60% invested in equities, 25% invested in bonds and 15% invested in property.
- 6.8 The financial assumptions used in the valuation are set by reference to the redemption yield available on gilts of appropriate term, having regard to the Fund liabilities. In addition, we have made an allowance for the excess return that may be expected to be earned on a diversified portfolio of investments, which includes equities and property. However, no explicit account is taken of the additional risks involved in investing in assets that are not a close match to the ongoing liabilities.

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6.9 If the assets of the Fund were invested wholly in gilts selected such that the cashflows closely match the pattern of benefits expected to be paid from the Fund, ("the Minimum Risk" portfolio), then the valuation results would be broadly⁴ as follows.

Accrued (Past Service) Liabilities	£m
Value on minimum risk rate of return:	
Employee Members	43.9
Deferred Pensioners	13.0
Pensioners	46.0
Total	102.9
Total Value of Assets	78.0
Surplus (Deficit)	(24.9)
Funding Level	75.8%
Employer Contribution Rates	% of payroll
Future Service Funding Rate (Attained Age)	27.1%
Deficit Recovery Contributions (WLT)	£m per annum
Increasing*	3.5

Deficit recovery contributions are based on a payment period of 7 years (equal to the remaining working lifetime of employee members).

* Payments increasing at 4.4% per annum.

6.10 The main differences between these results and those on the ongoing basis as reported in Section 5 are as follows:

- it is necessary to hold more money in the Fund now to meet the past service benefits as a result of the lower discount rate (which in turn reflects the lower expected investment return on the "Minimum Risk" portfolio); and
- an increase in the employer's contribution rate is needed to meet the cost of the accruing benefits as it is assumed that lower returns will be achieved in the future.

6.11 Note that material residual risks would remain even if the investment policy followed the "Minimum Risk" portfolio. For example, it may not be possible to buy bonds of long enough duration, meaning that there would be uncertainty associated with the returns available on future investments. Our valuation above does not include any explicit contingency reserves in respect of these risks.

⁴ We discounted the liabilities falling due at all future durations at the minimum risk rate of return of 4.7% a year. In practice, the returns available on different bonds vary with the term of the bond.



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Appropriateness of investment strategy

6.12 The degree of mismatch between the actual investment strategy, which includes substantial investment in equities and property, and the minimum risk strategy is significant. As a result the funding level in the Fund will vary considerably if the returns achieved on equities and bonds diverge.

Sensitivity Analysis

6.13 The valuation results are particularly sensitive to the assumed rates of future investment return. If future investment returns are less than expected, for example due to falls in equity markets or falls in long term rates of interest, the funding level will deteriorate. To illustrate the sensitivity of the funding level to changes in equity and bond markets, we have considered the impact of the following events occurring soon after 31 March 2005:

- a) Equity-type investments (UK and international equities) fall by 25%, with no change in gilt (or property) values or yields; or
- b) The price of bonds rise such that there is a 1% fall in the nominal annual redemption yields available on fixed interest gilts and a 0.5% fall in the real annual yield available on index-linked gilts, with no change in equity prices or dividend yields, or property values or yields.

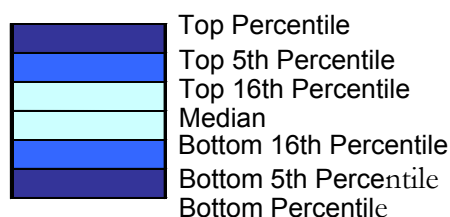
6.14 The table below shows the results that would arise for the whole fund if those events occurred soon after 31 March 2005.

Past Service Funding Levels (FL) (% of Liabilities)	Stable markets change	(a) Equities fall		(b) Bonds rise	
		New FL	Change	New FL	Change
	(i)	(ii)	(iii)=(ii)-(i)	(iv)	(v)=(iv)-(i)
Ongoing valuation (2% ERP)	86%	70%	(16%)	80%	(6%)
Minimum Risk Bond Returns	77%	62%	(15%)	74%	(3%)

6.15 The scenarios illustrated are by no means exhaustive and should not be taken as the limit of how extreme future experience could be.

6.16 We have also considered the inter-dependency of equity and gilt asset classes within our stochastic asset model to illustrate the spread of potential returns. There are no margins for prudence taken in setting the parameters of the model. The mean additional return from equities relative to gilts is assumed to be 3% a year.

6.17 The charts below use the following colour scheme⁵:



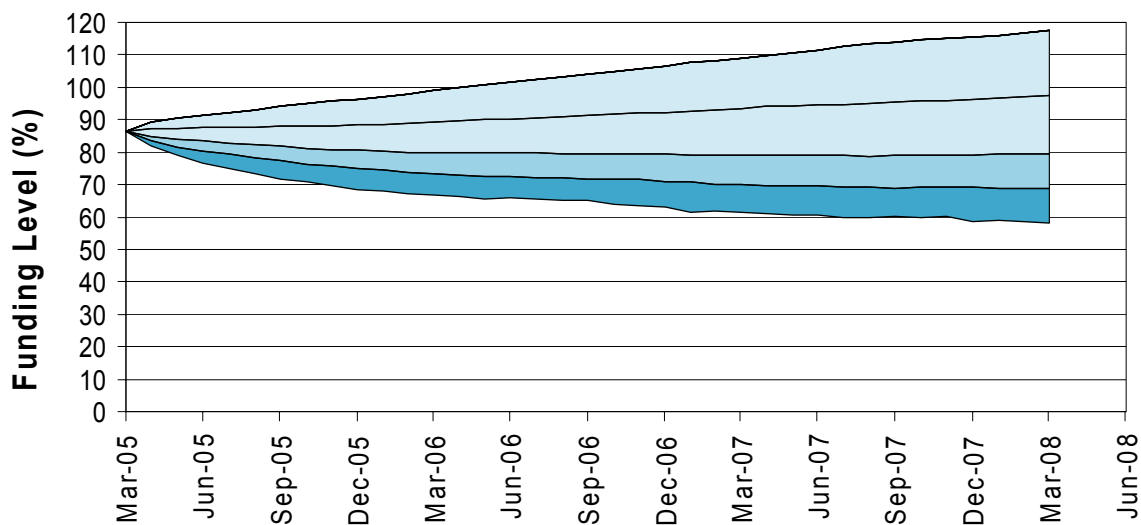
⁵ Please note that we have not shown the best 16% of the distribution of outcomes. This is because we have also not shown the bottom 1%. In broad terms, we estimate that you would have to give up the top 16% to protect yourself from the bottom 1% if you sought to purchase derivatives.



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6.18 The first chart illustrates how the funding level for the Fund might vary from this valuation date to the next valuation in 2008, allowing for the volatility of different asset classes. No allowance is made for any change in the valuation basis. The light blue area represents the outcomes that have a roughly 68% chance of occurring, so there is broadly a two in three chance of the funding level being between approximately 80% and 115% at the 2008 valuation. There is a 16% chance of the funding level being less than 70%. The opportunity for investment growth comes with a potentially significant downside risk.

Projection of Scheme Funding Level

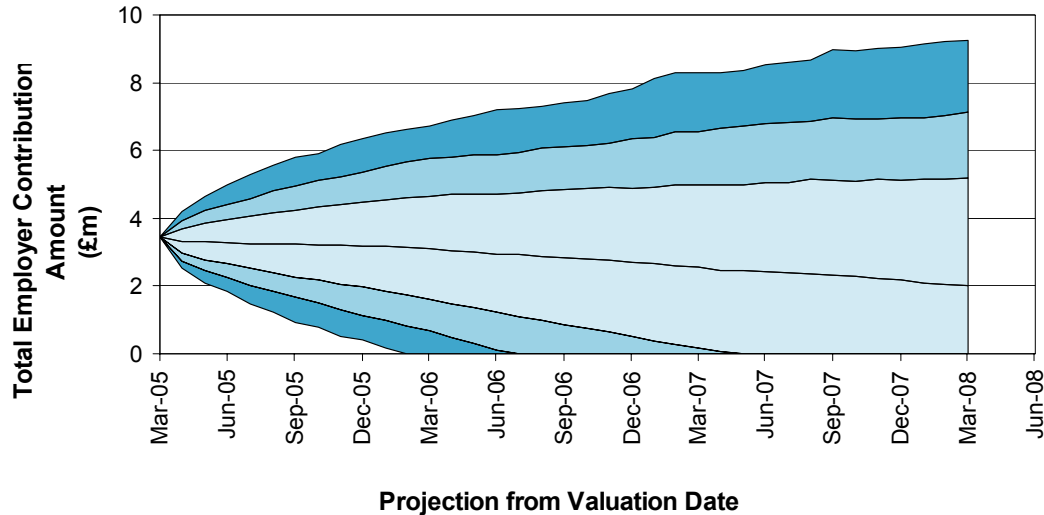


Projection from Valuation Date

6.19 The median outcome in the chart above is a funding level of close to 100% at the next valuation date, i.e. half the outcomes show there would be a deficit in 2008 and half the outcomes show there would be a surplus. The reason this indicates a much better position than the valuation (which suggests the deficit would be paid off over seven years) is that the charts allow for best estimate investment returns, whereas the valuation basis includes a margin for prudence.

6.20 The second chart illustrates how the total contribution amount, payable per annum, for the Fund might vary from this valuation date to the next valuation in 2008. The figures incorporate both the ongoing cost of future benefit accrual and also the additional monetary payments required to repay the deficit over a 7 year period.

**Projection of Common Contribution Amount
(Deficit Spread over payroll of 7 years)**



6.21 Here the light blue area again represents the outcomes that have a 68% chance of occurring, so there is a two in three chance of the total contribution amount being between zero and £5m per annum in the 2008 valuation. There is also a non-trivial likelihood (around 16%) of the total contribution amount being in excess of £7m per annum. The reason for the wide spread is the volatility of the predominantly equity investments of the Fund.

Investment Returns Required to Maintain 2005 Deficit

6.22 The allowance for expected equity outperformance used for the valuation of pre-retirement liabilities is more optimistic than in 2002. This raises the bar for the asset returns required in order to maintain the funding level at its current level. The value placed on pre-retirement liabilities anticipates a return on assets of 6.7% a year (5.2% for post-retirement liabilities). However, as the funding level is 86%, the actual return required on the assets held by the Fund to ensure the deficit does not get any larger, in monetary terms, will be greater than 6.7% a year for pre-retirement liabilities and greater than 5.2% for post-retirement liabilities (assuming no additional contributions are paid to recover the deficit).

6.23 We recommend that the Administering Authority reviews its investment strategy particularly in the light of:

- the funding position revealed by this valuation;
- the reduced prudential margins built into the reserving for liabilities;
- the increased sensitivity of results to interest rate changes following a fall in funding levels; and
- the capacity of First to be able to absorb further contribution rises if future experience is worse than assumed.

Asset-liability modelling may be helpful in understanding the investment risks and we understand that an asset-liability study has been commissioned.



Other risks and sensitivities

- 6.24 The valuation results do not include explicit contingency reserves for other unexpected non-investment related financial and demographic effects.

Longevity

- 6.25 The valuation results are very sensitive to unanticipated changes in future expected mortality of pensioners. Future life expectancy is uncertain. Recent medical advances, changes in lifestyles and generally greater awareness of health-related matters have resulted in longevity improving in recent years at a faster pace than most experts had foreseen. It is unknown whether such improvements will continue in the future. Certain factors, such as advancements in genetic medicine, would point towards even greater improvements in longevity in the future; conversely, the increase in childhood obesity may result in a decline in longevity in future generations.
- 6.26 The mortality basis adopted for this valuation has been calibrated against recent mortality experience of pensioners in similar local authority funds. Whilst allowance has been made for future improvements in life expectancy based on standard actuarial tables, no allowance has been made for the accelerated improvements which have been observed in life office annuitants born around 1926 (the so-called "cohort effect"). Insurance companies and many private sector pension schemes do include allowance for the cohort effect in reserving for their pension liabilities.

Changes to Profile of Liabilities

- 6.27 Future results could also be affected by changes to the profile of the liabilities. For example:

Variations between Other Assumptions and Experience

- 6.28 The other main assumptions, to which the valuation results are sensitive, together with their associated risks, are described below.
- *Pay increases:* if increases in pensionable pay are higher than assumed, the funding position will deteriorate;
 - *Pension increases:* if pension increases are higher than assumed, the funding position will deteriorate;
 - *Withdrawals:* if fewer active members withdraw from pensionable service (with refunds of contributions or deferred pensions) than assumed, the funding position will deteriorate; and
 - *Ill-health retirements:* if more members retire early on ill-health grounds, and/or retire at a younger age than assumed, the funding position will deteriorate unless the employer makes additional payments.



7. Post-Valuation Events

- 7.1 Over the period from 1 April 2005 to 28 February 2006, equity markets (as measured by the FTSE All Share Total Return Index) have risen by around 23%. Bonds and property have also appreciated considerably. Assuming aggregate Fund returns of 19% over the period, compared to the 5.5% return on the liabilities (using an aggregate discount rate of 6.1% for 11 months), this would serve to improve the funding level by around 13%.
- 7.2 However, since the valuation date, real long-term gilt yields have fallen considerably, from 1.7% p.a. to 0.9% p.a. as at 28 February 2006. This will lead to a substantial rise in the assessed value of the past service liabilities (by around 11%).
- 7.3 Overall, the funding level is likely to have improved by 1-2% in broad terms. However, the fall in gilt yields will also have an effect on the assessed cost of future service benefits, and would add around 4.5% of payroll to the employer share of the cost (if recalculated using market conditions as at 28 February 2006).
- 7.4 Taking these events into account, the common contribution rate, based on market conditions as at 28 February 2006 on the basis set out in the FSS would be approximately 4.5% of payroll higher than the results of the 2005 valuation. Deficit recovery contributions, paid as regular lump sums over the remaining working lifetime of the Fund's employee members, would remain broadly unchanged at around £1.9m per annum in the first year (increasing at a rate of 4.4% p.a. thereafter). If market conditions do not improve (in particular if there is not an increase in real bond yields), then further contribution rises may be necessary following the 2008 valuation.



8. Conclusions and Recommendations

- 8.1 We have carried out this valuation in accordance with the Administering Authority's Funding Strategy Statement.
- 8.2 The valuation reveals that the ongoing funding level of the Fund on 31 March 2005 was 86%. The shortfall of assets compared to the past service liabilities was £12.4m.
- 8.3 The average cost of accruing benefits payable by First, including administration expenses and lump sum death in service benefits, is 23.8% (equivalent to 460% of employees' contributions).
- 8.4 The shortfall of assets over the past service liabilities requires the employer to make capital payments to recover the deficit over a period of 7 years (equal to the remaining working lifetime of employee members). If these payments are amounts increasing by 4.4% per annum then the employer will be required to pay an additional £1.9m in the first year, starting from 31 March 2006.

Contribution Rates

- 8.5 To formally confirm the contribution rate, a Rates and Adjustment Certificate is included as Appendix F, detailing the minimum contribution rates and amounts for the employer. The Certificate details the contributions due in each of the three financial years from 2006/07.
- 8.6 The employer should pay additional sums to meet the capital costs of any early retirements using the methods and factors issued by us from time to time.
- 8.7 In addition, the Administering Authority may monitor ill-health experience and may ask the employer to meet the capital costs of any ill-health retirements that exceed those allowed for within our assumptions.

Risk Management

- 8.8 The valuation results are dependent on the valuation method and the actuarial assumptions (described in section 4). Section 6 discusses the key risks underlying the results and the assumptions to which the results are particularly sensitive and provides some illustration of how the Fund's funding position may change if the assumptions are not borne out in the future.
- 8.9 The valuation of liabilities anticipates returns of 6.7% p.a. for pre-retirement liabilities (5.2% for post-retirement liabilities) assuming that the liabilities are fully funded. The shortfall of assets means that in order to ensure the deficit does not get any larger (in monetary terms and ignoring the effect of future accruals and contributions), it would be necessary to achieve average annual returns in excess of 6.7% for pre-retirement liabilities (and greater than 5.2% for post-retirement liabilities).
- 8.10 Under the provisions of the Regulations, the next formal valuation of the Fund is due to be carried out as at 31 March 2008. In light of the uncertainty of future financial conditions we recommend that the financial position of the Fund is monitored by means of interim funding reviews in the period up to the next triennial valuation. This will give early warning of changes to the funding positions and possible contribution rate changes.



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8.11 We recommend that the Administering Authority continues to keep its investment strategy and ongoing risk management programme under review.

Other Matters

8.12 If the employer was to cease participate in the Fund this should be referred to us in accordance with Regulation 77 of the Regulations.

8.13 Any bulk movement of scheme members:

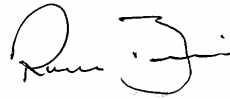
- involving 10 or more scheme members being transferred from or to another LGPS fund, or
- involving 2 or more scheme members being transferred from or to a non-LGPS pension arrangement

should be referred to us to consider the impact on the Fund.

8.14 We would be pleased to answer any questions arising from our report.



**Alison Murray FFA
30 March 2006**



Ronald S Bowie FFA



**Strathclyde Pension Fund
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Appendix A - Benefit Structure

Summary of Non Discretionary Benefits Applicable to All Employers

Normal Retirement Age (NRA)	Age 65 or if earlier and a member immediately before 1 April 1998, age 60 or after age 60 on attaining 25 years of scheme membership.
Earliest Retirement Age	NRA or, if earlier, the rule of 85 date (when years of age plus years of scheme membership total to 85). Limitations on payment of benefits prior to age 60.
Members' Contributions	Officers - 6% of pensionable pay Manual Workers – 5% of pensionable pay (6% for post 31 March 1998 entrants with no continuing rights).
Pensionable Pay	All salary, wages, fees and other payments in respect of the employment, excluding non-contractual overtime and some other specified amounts. Some scheme members may be covered by special agreements.
Final Pay	The pensionable pay in the year up to the date of leaving the scheme. Alternative methods used in some cases, e.g. where there has been a break in service or a drop in pensionable pay.
Period of Scheme Membership	Total years and days of service during which a member of the Fund. Additional periods may be granted (e.g. transfers from other pension arrangements, augmentation).
Normal Retirement Benefits	Pension - 1/80th of final pay for each year of scheme membership. Lump Sum - 3/80th of final pay for each year of scheme membership.
Early Retirement Benefits	On retirement after age 50 with employer's consent a pension and lump sum based on actual scheme membership completed may be paid, subject to reduction on account of early payment in some circumstances.



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Ill-Health Benefits	In the event of premature retirement due to permanent ill-health or incapacity, an immediate pension and lump sum are paid based on actual scheme membership plus an enhancement period of scheme membership. The enhancement period is dependent on scheme membership at date of leaving. No reduction is applied due to early payment.
Pension Increases	All pensions in payment, deferred pensions and dependant's pensions other than benefits arising from the payment of additional voluntary contributions are increased annually. Pensions are increased partially under the Pensions (Increases) Act and partially in accordance with statutory requirements (depending on the proportions relating to pre 88 GMP, post 88 GMP and excess over GMP).
Death after Retirement	<p>A spouse's pension of one half of the member's pension (generally post 1st April 1972 service for widowers' pension) is payable; plus</p> <p>If the member dies within five years of retiring the balance of five years' pension payments will be paid in the form of a lump sum, plus</p> <p>Children's pensions may also be payable.</p>
Death in Service	<p>A lump sum of two times final pay, plus</p> <p>A spouse's pension of one half of the ill-health retirement pension that would have been paid to the scheme member if he had retired on the day of death, plus</p> <p>Children's pensions may also be payable.</p>
Leaving Service Options	<p>A deferred pension payable from Earliest Retirement Age (minimum of age 60); or</p> <p>A transfer payment to either a new employer's scheme or a suitable insurance policy, equivalent in value to the deferred pension; or</p> <p>If the member has completed less than two years' pensionable service, a return of the member's contributions with interest, less a State Scheme premium deduction and less tax at the rate of 20%.</p>

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State Pension Scheme	The Fund is contracted-out of the State Second Pension (S2P), previously the State Earnings Related Pension Scheme (SERPS) and the benefits payable to each member are guaranteed to be not less than those required to enable the Fund to be contracted-out.
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Notes:

All benefits under the Fund are subject to limits laid down from time to time by the Inland Revenue.

Certain categories of members of the Fund are entitled to benefits that differ from those summarised above.

Discretionary Benefits

- A5 The Regulations give employers a number of discretionary powers, including:
- (a) the awards of periods of augmentation under Regulation 51;
 - (b) the payment of benefits on employer's consent prior to age 60 under Regulation 30;
 - (c) the reduction or suspension of scheme member contributions on attaining 40 years' scheme membership under Regulation 14;
 - (d) not applying the suspension of spouses' pensions on remarriage or cohabitation for members who retired before 1 April 1998.
- A6 The effect on benefits or contributions as a result of the use of (a) to (c) above prior to 1 April 2005 has been allowed for in this valuation to the extent that this is reflected in the membership data provided. No allowance has been made for the future use of discretionary powers. Our assumptions do not anticipate any saving from the suspension of spouses' pension; to the extent that this continues, there will be a saving.

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Appendix B - Membership Data

B1. A summary of the membership records on which this valuation is based, and on which the previous valuation was based, is as follows:

Employee Members

	Number		Total Pensionable Pay (£000)		Average Pensionable Pay (£)	
	2005	2002	2005	2002	2005	2002
Full Time members						
Pre April 1998 Joiners:						
Male Officers	30	37	795	759	26,496	20,505
Female Officers	10	18	210	302	20,996	16,775
Male Manuals	377	506	5,811	6,923	15,415	13,683
Female Manuals	1	1	14	13	14,375	13,320
Post April 1998 Joiners:						
Males	-	-	-	-	-	-
Females	-	-	-	-	-	-
Full Timers Total	418	562	6,831	7,997	16,341	14,230
Part Time Members						
Pre April 1998 Joiners:						
Male Officers	-	-	-	-	-	-
Female Officers	-	-	-	-	-	-
Male Manuals	-	-	-	-	-	-
Female Manuals	-	-	-	-	-	-
Post April 1998 Joiners:						
Males	-	-	-	-	-	-
Females	-	-	-	-	-	-
Part Timers Total	-	-	-	-	-	-
Grand Total	418	562	6,831	7,997	16,341	14,230

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Pensioners

B2. The table below shows the distribution of pensioners, split by type of pensioner.

	Number		Annual Pension £(000)		Average £	
	2005	2002	2005	2002	2005	2002
III Health Retirals						
Male Officers	8	9	54	56	6,746	6,202
Female Officers	1	1	4	4	3,779	3,602
Male Manuals	262	231	1,207	958	4,606	4,149
Female Manuals	4	6	14	18	3,511	3,066
Normal/Early Retirements						
Male Officers	61	60	475	438	7,794	7,293
Female Officers	8	6	30	23	3,775	3,889
Male Manuals	212	177	803	573	3,788	3,236
Female Manuals	3	3	9	9	3,160	2,979
Dependants						
Widows	70	23	133	35	1,904	1,532
Widowers	1	2	1	1	683	657
Children	4	2	4	2	940	865
Total	634	520	2,735	2,117	4,313	4,072

Deferred Pensioners

B3. The table below shows the distribution of deferred pensioners.

	Number		Annual Pensions £(000)		Average £	
	2005	2002	2005	2002	2005	2002
Males	226	215	661	572	2,926	2,662
Females	17	10	74	37	4,378	3,678
Total	243	225	736	609	3,027	2,707

Notes

1 - The numbers relate to the number of records and so will include members in receipt of or potentially in receipt of more than one benefit.

2 - Annual pensions are funded items only include pension increases up to and including the 2005 PI Order.

Appendix C - Accounts and Asset Data

Assets at 31 March 2005

- C1. We were supplied with audited accounts for the years ended 31 March 2003, 31 March 2004 and 31 March 2005. The accounts for the year ended 31 March 2005 indicated that the market value for the Fund's assets as at the valuation date amounted to £78m
- C2. A summary of the Fund's assets as at 31 March 2005 is as follows:

Market Value of Assets	as at 31 March 2005	
	£(000)	%
UK Equities	37,617	48%
UK Fixed Interest Gilts	6,057	8%
UK Corporate Bonds	4,461	6%
UK Index Linked Gilts	3,934	5%
Overseas Equities	9,015	12%
Overseas Bonds	1,753	2%
Property	12,224	16%
Cash	-	0%
Net Current Assets	2,891	4%
TOTAL (excluding AVCs)	77,952	100%

This excludes the assets in respect of money purchase AVCs.

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Revenue Accounts for the Inter-valuation Period

Revenue Accounts	Year to	31 Mar 05 £ (000)	31 Mar 04 £ (000)	31 Mar 03 £ (000)	TOTAL £ (000)
EXPENDITURE	Retirement Pensions	2,569	2,336	2,235	7,140
	Retirement Lump Sums	556	616	722	1,894
	Death Benefits	-	-	-	-
	Transfer Values	78	37	267	382
	Refunds/CEPs	-	-	-	-
	Admin Expenses	19	26	41	86
	Investment Expenses	173	166	178	517
	Other Expenditure	-	-	-	-
	TOTAL		3,395	3,181	3,443
INCOME	Employee Contributions	367	392	413	1,172
	Employer Contributions	2,080	1,953	1,430	5,463
	Transfer Values	-	-	-	-
	Investment Income	2,270	2,293	2,035	6,598
	Other Income	-	-	-	-
TOTAL		4,717	4,638	3,878	13,233
Fund Value					
Assets at Start of Year		70,478	57,266	71,546	71,546
Net Cashflow		1,322	1,457	435	3,214
Change in value		6,152	11,755	(14,715)	3,192
Assets at End of Year		77,952	70,478	57,266	77,952
Annual Returns					
Approx Rate of Return		11.8%	24.4%	-18.2%	4.4%
WM LA Median		11.7%	23.4%	-19.5%	3.5%

Fund Insurance Arrangements

- C3. There are no insurance arrangements in place to provide benefits under the Regulations.

Appendix D - Valuation Method

- D1. Using our assumptions we estimate the payments that will be made from the Fund throughout the future lifetimes of existing employee members, deferred pensioners, pensioners and their dependants. We then calculate the amount of money that, if invested now, would be sufficient to make these payments in future, assuming that future investment returns are in line the discount rate. This amount is called "the present value" (or, more simply, "the value") of members' benefits. Separate calculations have been made in respect of benefits arising from service before the valuation date ("past service") and from service after the valuation date ("future service").

Past service funding position

- D2. A comparison is made of the value of the assets held with the value of benefits for past service (but allowing for future pay and pension increases). If there is an excess then there is a past service surplus. If the converse applies there is a past service shortfall.

Future service contribution rate

Employers not Admitting New Entrants

- D3. Since the employer no longer admits new entrants we have adopted the *attained age* method of valuation. This is similar to the projected unit method described above, and produces the same past service position. The future service contribution rate calculation under the attained age method is summarised below.

Attained Age Method

- D4. The first stage is to calculate the value of the benefits (other than the lump sum death-in-service benefits) accruing to existing employee members over their anticipated period of future membership, by reference to projected pay as at the date of retirement or earlier exit. The value of members' ordinary contributions over the same period is then deducted and the net cost to the employer is calculated by expressing the value of the benefits accruing as a percentage of the members' pensionable pay over their remaining service lives.
- D5. The cost of the lump sum death in service benefit is separately assessed as amount that is likely to be paid out in an average year, based on the membership structure at the valuation date. Finally, an addition is made to cover the expenses of administration of the Fund.
- D6. If the actuarial assumptions adopted are unchanged, this funding method will, for pension benefits, give rise to a stable contribution rate in future years in respect of the existing membership. But this will only be so if certain surpluses or deficiencies revealed at subsequent actuarial valuations (i.e. those arising due to the fact that the cost of a year's accrual of pension increases with each year of age) are reflected in the contribution rate payable.



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Overall result

- D7. Any past service surplus (or shortfall) that remains can be applied to reduce (or increase) the contribution rate actually payable by the employer over the period following the valuation date.

Appendix E - Valuation Assumptions

Financial assumptions

- E1. The key assumptions adopted for this valuation and the previous valuation are summarised in the table below.

Derivation of Discount Rate	Mar 2005		Mar 2002	
	% p.a. Nominal	% p.a. Real	% p.a. Nominal	% p.a. Real
Minimum risk rate of return (fixed interest gilt yield)	4.7%	1.8%	4.9%	2.3%
Anticipated extra long-term return from:				
Equities	2.0%		1.6%	
Corporate Bonds	0.5%		0.5%	
Overall anticipated long-term return from:				
Equities	6.7%	3.8%	6.5%	3.9%
Bonds (100% corporates)	5.2%	2.1%	5.2%	2.6%
Discount rate (pre-retirement)	6.7%	3.8%	6.2%	3.6%
Discount rate (post-retirement)	5.2%	2.1%	6.2%	3.6%

The 2002 discount rate was calculated assuming 75% equities and 25% bonds (the latter being comprised of 60% corporates and 40% gilts).

In 2002, the additional long-term return from equities was 1.5% if calculated geometrically (i.e. $1.049 \times 1.015 - 1 = 6.5\%$).

"Real" figures are net of price inflation (calculated arithmetically).

Demographic assumptions

- E2. The demographic assumptions represent our estimate of future experience in the Fund. They take account of expected future trends (for instance future improvements in life expectancy) as well past experience in the Fund and other Local Government client funds. Sample rates are shown in the following tables.

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Age	Incidence per 1000 active members per annum											
	Male Officers & Post 98 Males			Male Manuals			Female Officers & Post 98 Females			Female Manuals		
	Death	Ill Health Retirement		Death	Ill Health Retirement		Death	Ill Health Retirement		Death	Ill Health Retirement	
		F/T	P/T		F/T	P/T		F/T	P/T		F/T	P/T
20	0.30	-	-	0.30	-	-	0.16	-	-	0.16	-	-
25	0.30	-	-	0.30	3.2	2.6	0.16	0.6	0.5	0.16	2.6	2.1
30	0.36	0.6	0.5	0.36	5.2	4.2	0.24	1.0	0.8	0.24	3.6	2.9
35	0.42	0.8	0.6	0.42	7.8	6.2	0.40	2.0	1.6	0.40	5.2	4.2
40	0.72	1.4	1.1	0.72	10.8	8.6	0.64	2.6	2.1	0.64	7.2	5.8
45	1.20	3.2	2.6	1.20	15.6	12.5	1.04	4.2	3.4	1.04	9.2	7.4
50	1.92	8.8	7.0	1.92	22.8	18.2	1.52	8.2	6.6	1.52	13.6	10.9
55	3.00	18.0	14.4	3.00	36.8	29.4	2.00	21.6	17.3	2.00	25.6	20.5
60	5.40	36.0	28.8	5.40	70.0	56.0	2.56	-	-	2.56	-	-

Age	Incidence per 1000 active members per annum			
	Male Officers & Post 98 Males	Male Manuals	Female Officers & Post 98 Females	Female Manuals
	Withdrawal	Withdrawal	Withdrawal	Withdrawal
20	150	153	154	247
25	101	119	162	244
30	62	90	138	193
35	42	70	95	140
40	31	56	64	106
45	24	42	49	81
50	18	28	39	60
55	13	20	32	47
60	-	-	-	-

Age	Promotional Salary Scales							
	Male Officers & Post 98 Males		Male Manuals		Female Officers & Post 98 Females		Female Manuals	
	FT	PT	FT	PT	FT	PT	FT	PT
20	100	100	100	100	100	100	100	100
25	100	100	100	100	100	100	100	100
30	123	113	100	100	115	105	100	100
35	138	123	100	100	126	110	100	100
40	148	128	100	100	136	115	100	100
45	158	128	100	100	136	115	100	100
50	168	128	100	100	136	115	100	100
55	168	128	100	100	136	115	100	100
60	168	128	100	100	136	115	100	100



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Other Assumptions

Age Retirements It is assumed that active members will retire at age 60 or when they would satisfy the *Rule of 85* if later subject to no later than age 65.

Pensioner Mortality Current Pensioners - PXA92 c2005
Prospective Pensioners - PXA92 c2015

The following age ratings are applied in each case:

	<u>Males</u>	<u>Females</u>
Officers (& post-98 joiners)	-1 years	-1 years
Manuals	+2 years	+1 year

Ill Health Retirement - as above, except rated up by 5 years (6 years for male manuals)

Widows – one year older than female pensioners

Proportions Married (including a loading for dependants benefits) A varying proportion of members will be married and entitled to a spouse's pension. Sample proportions are:

<u>Age</u>	<u>Males</u>	<u>Females</u>
40	62%	67%
60	80%	75%
80	72%	55%

Wife/Husband Age Difference Husbands are assumed to be 3 years older than their wives

Administration Expenses 0.4% of payroll



Appendix F - Rates and Adjustments Certificate

In accordance with Regulation 76 of the Local Government Pension Scheme Regulations (Scotland) 1998, as amended, we have made an assessment of the contributions that should be paid to the Fund by the employing authorities as from 1 April 2006 in order to maintain the solvency of the Fund.

The required contribution rates are set out in the attached statement.



Signature

Date: 30 March 2006
Name: Alison Murray
Qualification: Fellow of the Faculty of Actuaries
Firm: Hymans Robertson LLP
20 Waterloo Street
Glasgow
G2 6DB



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STATEMENT TO THE RATES AND ADJUSTMENTS CERTIFICATE

The Common Rate of Contribution payable by the employer under Regulation 76 for the period 1 April 2006 to 31 March 2009 is detailed in the table below.

Year	Employer Contribution Rate		Additional Monetary Payments* (£000 per annum)
	(% of Payroll)	(% of Employee Ctbns)	
2006/07	21.7%	420%	1,920
2007/08	22.7%	440%	2,004
2008/09	23.8%	460%	2,100

*Increasing at 4.4% per annum, payable monthly.

Notes

Contributions expressed as a percentage should be paid into the Fund at a frequency in accordance with the regulations.

Further sums should be paid to the Fund by employers to meet the capital costs of any ill-health retirements that exceed those included within our assumptions.

The certified contribution rates represent the minimum level of contributions to be paid. Employing authorities may pay further amounts at any time and future periodic contributions may be adjusted on a basis approved by ourselves.

Future periodic contributions may be adjusted on a basis approved by ourselves.

Additional monetary payments should be made in order to recover the existing deficit over a period of seven years. In this case, monthly payments totaling £1.92m should be made in the year to 31 March 2007. Thereafter, this annual amount should increase at the rate of 4.4% per annum.

The Administering Authority and employer should discuss which payment strategy is most suitable.

