Falkirk Council Pension Fund

Actuarial Valuation as at 31 March 2002

Valuation Report

Prepared by:

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Dear Mr Janetta

Actuarial Valuation as at 31 March 2002

As instructed I have carried out an actuarial valuation of the Falkirk Council Pension Fund ("the Fund") as at 31 March 2002.

The valuation has been carried out in accordance with Regulation 76 of the Local Government Pension Scheme (Scotland) Regulations 1998 ("the Regulations").

I now have pleasure in presenting my report on the results of the actuarial valuation to Falkirk Council as administering authority to the Fund. This report has been prepared in accordance with the Actuarial Profession's Guidance Note 9 as it applies to the Local Government Pension Scheme and current at the date of this report. In particular I have not shown the effect of discontinuance of the scheme.

My report is set out in the following sections

1. Introduction

Purpose of the Valuation

The main purpose of the valuation is to review the financial position of the Fund and to determine the rate at which the employing bodies participating in the Fund should contribute in the future to ensure that the existing assets and future contributions will be sufficient to meet future benefit payments from the Fund.

Previous Valuation

The previous valuation was carried out as at 31 March 1999 and the results of that valuation were set out in Watson Wyatt's report dated July 2000.

The results of the previous valuation indicated that the assets of the Fund represented 105% of the accrued liabilities of the Fund. The Common Rate of Contribution was certified as 140% of employees' contributions. At the time of the previous valuation, the common rate of employers' contributions was 110% of employees' contributions. The rise from 110% to 140% was phased in over 3 years as shown in the table below.

Financial Year	Employer Contributions (% of employees' contributions)	Employer Contributions (% of payroll)
1999/2000	110%	6.0%
2000/2001	130%	7.1%
2001/2002	140%	7.7%
2002/2003	150%	8.2%

Intervaluation Period

The assessed cost of future service benefits was 165% at the previous valuation. Employer contributions paid over the period since that valuation were less than this, as a result of the common practice of spreading the disclosed surplus over the remaining working lifetime of employee members.

During the intervaluation period there were a number of amending Regulations issued although there were no significant changes affecting the benefits paid from the Fund.

With effect from 1 April 1998, new entrants to the Fund have no longer been classified as officer or manual employees and all new employee members contribute at the rate of 6% of pensionable pay. For this valuation, the demographic assumptions that I have adopted for all post-98 entrants are the same as those adopted for pre-98 officers. I will monitor the actual experience of post-98 entrants separately at future valuations and will modify these assumptions in light of actual experience if appropriate.

2. Valuation Process

Funding Method

Contributions are paid to the Fund by the employing bodies to provide for the benefits which will become payable to Fund members when they fall due. The funding objectives are to meet the cost of Fund members' benefits whilst they are working and to build up assets to provide adequate security for the benefits as they are earned.

The factors affecting the Fund's finances are constantly changing and so it is necessary for its financial position and the contributions payable to be reviewed, from time to time, by means of an actuarial valuation to check that these objectives are being met.

At this valuation I have, as in the past, adopted an approach which 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:-

(a) The *past service funding level* of the Fund. This is the ratio of accumulated assets to liabilities in respect of past service after making allowance for future increases to members pay and pensions in payment. A funding level in excess of 100% indicates a *surplus* of assets over liabilities, a funding level of less than 100% indicates a *deficit*.

(b) The *future service funding rate* i.e. the level of contributions required from the employing bodies to support the cost of benefits accruing in future.

The method I have adopted at this valuation is known as the "Projected Unit Method". The key feature of this method is that in assessing the future service cost I calculate the contribution rate which meets the cost of benefits accruing in the year after the valuation date. This is the same method adopted at the previous valuation and is an appropriate method for a Fund which is open to new members.

A full description of the valuation methods adopted at this valuation is set out in Appendix A.

Valuation Data

In my review of the funding position of the Fund I start with the known facts at the valuation date i.e. the benefit structure, the Fund's membership and the accumulated assets.

A summary of the benefits provided by the Fund is set out in Appendix B. A summary of the data used in my valuation calculations is set out in Appendix C.

I have carried out reasonableness checks on the data supplied. I have no reason to believe that it is not materially complete and correct.

Finally, I was supplied with audited accounts for the years from 1 April 1999 to 31 March 2000, 1 April 2000 to 31 March 2001 and 1 April 2001 to 31 March 2002. I have excluded money purchase AVCs from my calculations. I have made an allowance for the current capital value of future expected additional employer contributions in respect of early retirements over the intervaluation period in calculating the value of assets for the purpose of the valuation.

The following table summarises the market value assets of the Fund as at the valuation date split into the categories of equities, property and bonds/cash.

Assets at This Valuation (excluding AVCs)	Market Value at 31 March 2002 £(000)	%
Equities	471,545	77%
Property	51,812	8%
Bonds	92,379	15%
Total	**615,736**	**100%**

Further details of the assets held by the Fund are set out in Appendix C.

3. Valuation Assumptions

I need to make assumptions about the factors affecting the Fund's future finances such as inflation, pay increases, investment returns, rates of mortality, early retirement and staff turnover etc in order to place a value on the liabilities.

Future levels of pay increases will determine the quantum of benefit to be paid in future in respect of employee members as well as affecting the amount of contributions received by the Fund. Once in payment, pension benefits, in excess of Guaranteed Minimum Pensions ("GMPs") are linked to the Retail Prices Index through increases granted in line with the Pensions (Increase) Act 1971.

The *cost* of providing for benefits, however, depends not only upon the amount but also the *incidence* of benefits paid i.e. at what point in the future benefits come into payment and in respect of pension benefits for how long they continue to be paid.

As contributions are being invested now to provide for benefits payable in the future i.e. the benefits are being *prefunded*, then part of the cost of providing the benefits can be met from investment returns achieved by the Fund's assets built up from contributions. The higher the rate of return achieved by the assets the lower the contributions that will be required in future to meet the cost of the benefits.

The assumptions adopted at the valuation can therefore be considered as:

- *demographic* assumptions which generally speaking are used to estimate the likelihood of benefits and contributions being paid; and

- *financial* assumptions which generally speaking are used to estimate the *amount* of benefits and contributions payable and to place a current i.e. *present* value on these benefits and contributions.

Financial Assumptions

Traditional Approach

In the past actuarial valuations have generally been completed using what might be described as *traditional* actuarial techniques where the assumptions for the future have been based on long term historical averages – i.e. effectively assuming that long term historical trends will continue into the future. This was the approach used for the 1999 actuarial valuation.

One particular feature of the traditional approach is that actuaries take the value of assets as the discounted value of future income streams (sometimes known as actuarial values of assets) rather than value these using the market value. The reasons for adopting such an approach are generally regarded as:-

- It is a consistent approach to valuing the liabilities and determining contribution rates.

- Actuarial values have in the past simply been smoothed market values and so adopting such an approach to asset valuations leads to more stable valuation results and hence more stable contribution rates.

The traditional approach to actuarial valuations therefore is essentially to make appropriate long term assumptions to determine the liabilities of the Fund based on long term historical averages and then to value the assets on a basis consistent with those assumptions.

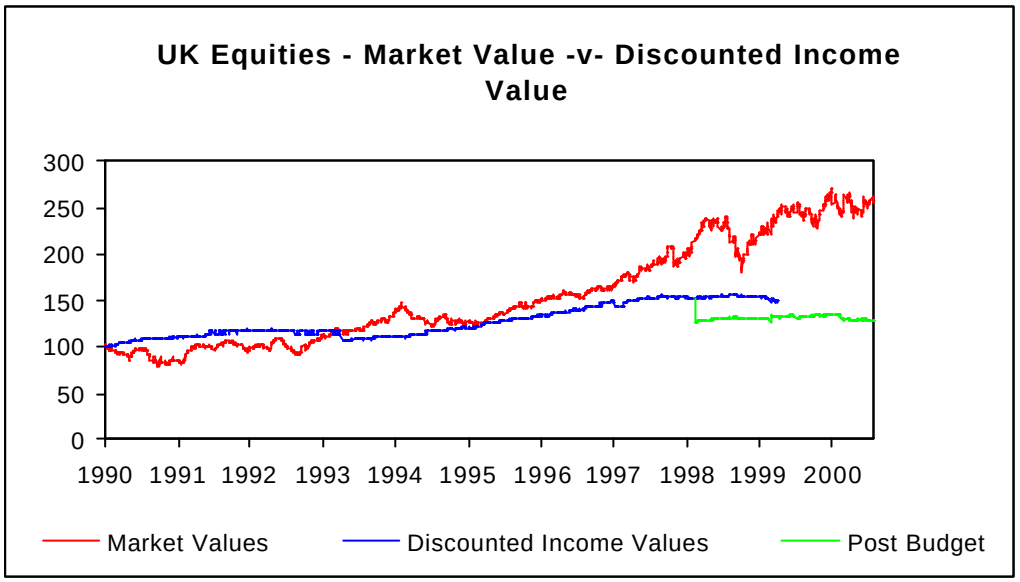
Market-Related Methods

The traditional approach has, however, been the subject of much discussion in recent times. It is widely accepted that alternative methods (described as market related) may be more appropriate in future.

There are a number of reasons why this debate has arisen. The main reason is due to changes in corporate dividend policy which has affected the traditional method of valuing the Fund's assets as follows:-

- Rather than reward their shareholders only with dividends, companies have adopted an approach of rewarding their shareholders by other means including share buybacks etc. Unless some modification was made to the traditional approach to allow for share buybacks and other methods by which companies may distribute their earnings, the traditional approach will produce asset values that could diverge significantly from the market value for long periods. Whilst in the past there have been times when the discounted income value has been significantly different to the market value, over the long term the two values

have tended to converge. The following graph shows how actuarial and market values have diverged in recent years.



- This change in corporate dividend policy increased as a result of the abolition of tax credits on UK equity dividends in 1997. It means that rewarding a large proportion of shareholders, namely pension funds, by paying dividends is now less tax efficient.

- There has always been the presentational issue of valuing the assets at something different to the market value.

- The new accounting standard FRS17 requires employer pension costs for accounting purposes to be determined on a market-related basis.

There are a number of approaches that can be adopted in completing a valuation using a market-related method. However the general approach is to take the assets at their market value and then derive assumptions consistent with that value (compared to the traditional approach where the assumptions are derived first of all and then the assets valued on a consistent basis).

A key issue in adopting a market-related approach is the expected rate of return to be earned on assets in future and the discount rate to be adopted to discount future liabilities. I have adopted an approach whereby assumptions such as the inflation rate, discount rate and related assumptions are derived from market information such as bond yields. The approach also derives the rate of return expected from other asset classes such as equities by increasing the discount rate by the addition of a risk premium.

Method Adopted

In completing this valuation I have used a market-related method, which derives the financial assumptions used for discounting liabilities by considering various average yields in the 12 months leading up to the valuation date. It then values the assets of the Fund at a value based on the average market value in the 12 months to the valuation date. Using average yields and market values in the 12 months preceding the valuation date builds in an element of smoothing and stability for the future.

In times of rising equity markets (as was the case at the previous valuation in 1999) using this approach would have led to the assets being taken into account at less than their market value.

If I retained the same approach in 2002, there would have been a 1% rating up of assets as at 31 March 2002. Given the subsequent equity market falls, I believe that it is inappropriate to write up assets. I have therefore proposed to take assets into the balance sheet at 100% of their market value, plus the value of outstanding capital payments for previous early retirements.

Derivation of Assumptions

The key financial indicators from which I derive my valuation assumptions for this valuation are set out below:

Yields Smoothed Over Year to:	Mar 2002 % p.a.
Conventional gilt yields	4.9%
Index Linked gilt yields	2.3%
Implying:	
Future price inflation	2.6%
Risk-free return (nominal)	4.9%
Risk-free return (real)	2.3%

For the purposes of the 2002 valuation I have assumed that, over the long-term, the fund's equity component will deliver a return of 1.5% per annum more than the risk-free rate of return on gilts.

I have assumed a notional portfolio of 75% equities and 25% bonds, of which half are gilts and half are corporate bonds, in deriving the discount rate. This gives an anticipated long-term return on assets of 1.25% pa more than the risk-free rate of return for both past and future service. Given the average risk-free return over the year to 31 March 2002 of 4.9%, this gives a discount rate of 6.2% pa, as derived in the table below.

Financial Assumptions	Mar 2002	
	% p.a. Nominal	% p.a. Real
Anticipated extra long-term return from:		
Equities	1.50%	
Bonds	0.25%	
Overall anticipated long term return from:		
Equities	6.5%	
Bonds	5.2%	
Discount Rate (75% equities/25% bonds):	6.2%	3.6%
General Pay Increases (before age-related scale)	4.1%	1.5%
Price Inflation/Pension Increases	2.6%	0.0%

This financial basis will lead to a slightly higher value being placed on the scheme's liabilities than at the 1999 valuation (which adopted a real rate of return of 3.8%p.a.).

At the previous valuation it was assumed that pay growth would be 1.75% per annum more than price inflation. I would propose to reduce the real pay growth assumption to 1.5% per annum, but include a greater allowance for age-related pay progression.

Demographic Assumptions

Mortality

Mortality investigations over the last few years have concluded that the population at large is living longer and that this improvement will continue at a faster rate than seen in the past. Analyses of pensioner longevity over the course of the last 20 years or so confirms that pensioners are living longer although experience does vary across the country and from Fund to Fund.

I have therefore incorporated revised mortality tables for both existing pensioners and current active members and deferred benefits members. I have adopted a set of tables known as the PA92 tables (a series of tables derived from underlying mortality as at 1992 which can be projected to any year in the future).

For current pensioners, active members and deferred benefits members who will become pensioners at some stage in the future I have used the table known as PA92 c2002 which is the projected mortality from the 1992 tables to 2002 – i.e. expectations of current mortality. Investigations in other Scottish authorities indicate that current pensioners are dying slightly

earlier than this table implies. Accordingly, I have assumed that current pensioners have the rates applicable to individuals one year older.

The table below shows the expectations of life implied by the old and new tables for pensioners retiring at age 60.

Expectation of Life on Retiring at age 60 (years from age 60)

	1999 Valuation	2002 Valuation	Difference %
Non Pensioners:			
Males	19.5	22.6	16%
Females	24.2	25.6	5%
Pensioners:			
Males	19.5	21.7	11%
Females	24.2	24.6	2%

4. Intervaluation Experience

The following tables set out, in summary, the actual experience of the Fund during the intervaluation period compared to the assumptions adopted at the previous valuation.

Financial Experience

	Nominal		Real	
	Actual % p.a.	Expected % p.a.	Actual % p.a.	Expected % p.a.
Investment Returns	3.1%	7.0%	1.1%	4.0%
Pay Increases (excl increments)	5.5%	4.75%	3.5%	1.8%
Price Inflation (Pension Increases)	2.0%	3.0%	-	-

The principal conclusions are:

- Real investment returns only averaged around 1% a year over the period to 31 March 2002. This was around 3% p.a. less than that assumed at the 1999 valuation, leading to an expected reduction in the funding level on a like for like basis of around 10 percentage points. (No account is taken here of equity market falls since 31 March 2002).

- However, this was partially offset by the release of the write-down of the asset value at the last valuation (this was 17% of the 1999 market value). Again, this takes no account of equity market falls since 31 March 2002.

- Pay increases in respect of those who were members of the Fund throughout the intervaluation period were higher than expected in both nominal and real terms leading to a reduction in the funding level relative to the previous valuation

- Price inflation was relatively benign, with headline RPI only rising by 6.3%, or 2.0% a year (actual pension increases are slightly higher because of using September to September RPI for increases in the following April).

Overall the financial experience of the Fund during the intervaluation period compared to the assumptions adopted at the previous valuation was a strongly negative factor during the intervaluation period.

However expectations of future returns have declined as discussed in Section 3. The financial position of the Fund depends not only on past experience but also expectations of future experience.

Demographic Experience

Employee Members

	Actual	Expected	% Diff
Early Leavers	2,377	895	166%
Deaths	28	41	-32%
Ill Health Retirements	282	292	-3%
Early Retirements	100	-	

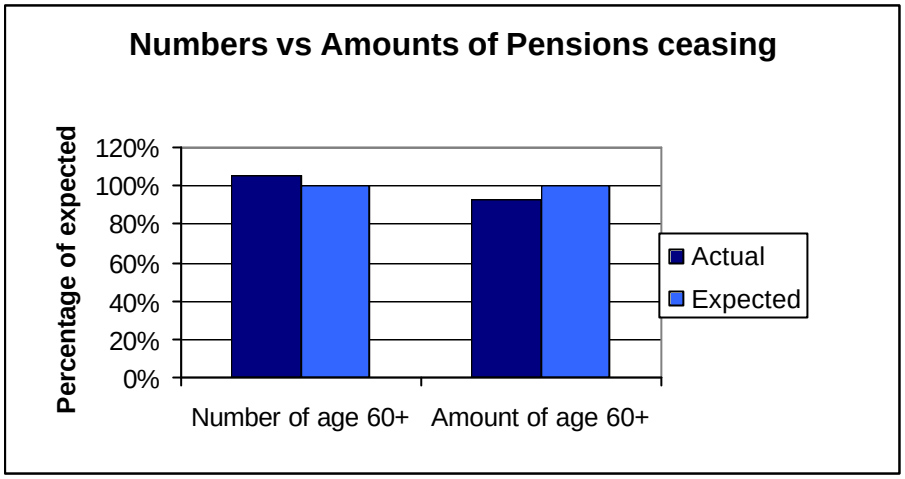
Additional contributions were paid to meet the costs of the redundancy/efficiency early retirements. As a result, the financial impact of early retirements during the intervaluation period should be broadly neutral. Of the other experience items, early leavers have had the most impact - more early leavers than expected has had a positive impact on funding level since if an employee member leaves their deferred pension is linked to price inflation rather than salary increases. I assume price inflation is lower than earnings growth.

Pensioner Mortality: Cessation of Pensions in Payment

	Deaths		
	Actual	Expected	% Diff
Ill Health Pensioners	128	116	10%
Age Pensioners	303	304	0%
Dependants	126	109	15%
Total	557	529	5%

The number of pensions ceasing during the intervaluation period was higher than the numbers expected, particularly for dependants (this could in part relate to children's pensions ceasing).

At first sight this may appear inconsistent with the expected results of other funds. However, other investigations have shown that if the *amounts* of pensions ceasing is analysed (rather than the *number*) the opposite conclusion is drawn. That is, those with smaller pensions tend to die sooner. My mortality rates are based on pension amounts and not numbers of pensioners. The difference is borne out in the Falkirk fund, as the following graph illustrates.



The underlying trend is of improving mortality and as I have indicated earlier I have modified my assumptions at this valuation to allow for pensioners both current and prospective to live longer than previously assumed.

5. Valuation Results

The following table sets out the valuation results for the Fund using the methods and assumptions described earlier in my report. The figures shown in the table exclude the assets and liabilities in respect of money purchase AVCs.

Past Service Liabilities	**£m**
Employee Members	338
Deferred Pensioners	44
Pensioners	233
Total	616
Assets	616
Surplus (Deficit)	0
Funding Level	100%
Employer Contribution Rates	**% of employees' contributions**
Future Service Funding Rate	210%
Past Service Adjustment	0%
Total Contribution Rate	210%

These results incorporate the newer mortality tables as referred to on page 11 and a steeper salary scale than that used in 1999.

A reconciliation of the past service position is set out in the following table.

	£m	£m
Surplus(Deficit) at Previous Valuation		20
Interest on surplus/deficit	5	
Actuarial investment returns less than expected	(47)	
Salary increases greater than expected	(8)	
Pension increases less than expected	9	
Contributions less than cost of new benefit accruals	(8)	
Retirement experience	(2)	
Pensioner mortality	(1)	
Early Leavers	4	
Change in mortality assumptions/salary scale increases	(32)	
Change in method	90	
Changes in market conditions	(35)	
Miscellaneous	5	
Surplus(Deficit) at This Valuation		0

Investment Strategy

The profile of the liabilities of the Fund includes a significant proportion in relation to pensions that are in payment (38% of the liabilities as at 31 March 2002). The other liabilities relate mainly to employee members with salary related benefits. The equity bias of the investments (77% of the assets as at 31 March 2002) means that there is some mis-match of the assets and liabilities relative to the funding basis. The greater the proportion in equities, the greater the gearing of future changes in employer contribution to changes in the level of the equity market. I recommend that the Investment Committee considers the risk/reward balance from the current level of equity investment.

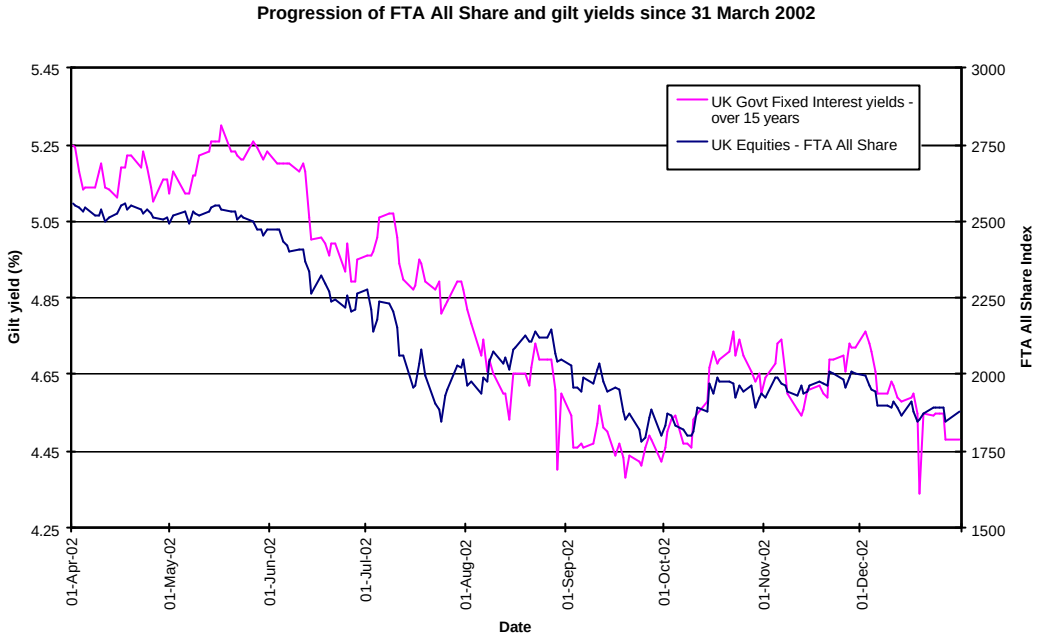
Post Valuation Events

Equity Market Volatility

The purpose of the smoothing mechanism I apply to the valuation of both assets and liabilities is to strip out some of the short-term volatility in investment market movements, which means that sharp rises or falls in stock market levels and yields are not immediately recognised.

Since the valuation date, equity markets in the UK and overseas have fallen materially, by around 30%. The overall fall in fund assets will be less due to holding non-equity assets and, as at the end of January 2003, I estimate that the typical fund return since 31 March 2002 would be around –25%. In addition, since March 2002, risk-free rates of return from government bonds have fallen as bond prices have increased. The yield on government bonds is currently around 4.5% p.a. and corporate bond yields have also fallen since the valuation date.

The graph below shows the movement of the FTA All share Index and the over 15 year gilt yield since the valuation date.



If markets fail to recover between now and the date of the next valuation then funding levels at the next valuation will be materially worse than shown in this valuation. If current conditions prevailed at the valuation date, the funding level would have been up to thirty percentage points lower (allowing for market falls and a lower discount rate). The effect of smoothing would mitigate this since smoothing means funding levels will avoid the effects of the bottom or top of the markets. Having said that, it also means there would be time lag of around 6 months before the benefit of the recovery in markets would show through in funding levels.

In light therefore of the uncertainty of future financial conditions I 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.

I am not recommending that employer contributions increase immediately but that employers are aware that unless there is a dramatic turnaround in equity returns up to 31 March 2005, the 2005 valuation can be expected to lead to higher employer contribution rates.

For example, if actual returns are in line with the assumed returns over the next 2 years (i.e. returns of 3.5%pa more than price increases after expenses), and the deficit was spread over a period of 20 years, I estimate that the employers' contributions could rise by around 120% of members' contributions, from 210% to 330%.

Employers may wish to anticipate the likely contribution rate increases in 2006/07 by making earlier increases, which would be reflected in their rates following the 2005 valuation.

Pension Increases

Pension increases in April are based on the RPI to the year to the preceding September. The rise in headline RPI for September 2002 was 1.7% and this is expected to become the rate of increase to pensions in payment and deferred pensions in April 2003. In valuing the accrued liabilities for pensioners and deferred pensioners I have anticipated the actual 1.7% rise in April 2003, reverting to the long term rise of 2.6% p.a. in April 2004 and thereafter.

6. Comments and Conclusions

The principal conclusions from this valuation are as follows:

- The funding level has reduced since the previous valuation. The major factors have been investment return being lower than expected, plus an allowance for increased longevity. This has been offset by other favourable factors including the change from a discounted income method to a market-related method.

- The Future Service Funding Requirement has increased since the previous valuation again reflecting lower anticipated levels of future investment returns compared to the previous valuation and allowing for improvements in mortality.

- An increase to the contribution rates paid by the employing bodies is required. As the Regulations require the employers' contributions to be as stable as possible, I have phased in the required increase over the period to the next valuation.

- The certified contribution rates for each employer are set out in my certificate in Appendix F.

- Since the valuation date there has been a material decline in world stockmarkets which will have had a negative impact of the financial position of the Fund. The effect of the smoothing mechanism I incorporate into the valuation process mitigates to some extent the full effect of the falls in markets. If markets fail to recover in the short term then the financial position of the Fund will be materially worse at the next valuation. If markets do recover then the financial position of the Fund at the next valuation will largely depend on the timing and level of any recovery.

- In light therefore of the uncertainty of future financial conditions I would suggest that the financial position of the Fund is monitored by means of interim funding reviews in the period up to the next triennial valuation.

- I recommend that the Investment Committee considers the risk/reward balance from the current level of equity investment.

- Employers may wish to contribute at higher rates than the *minimum* rates shown in the certificate.

Ill Health Monitoring

The administering authority should monitor each employers' ill health experience. I have shown on the Rates and Adjustments certificate in Appendix F the 'budget' included in the employers' rates. The cost of any ill health retirements will be assessed by the administering authority using factors agreed with me. If the cost of ill health retirements exceeds the threshold in any year, the employer should pay the additional cost into the fund.

New Employers Joining the Fund

Any new small employers or admission bodies joining the Fund with no previous interest in the Fund should pay 210% of employees' contributions (equivalent to 12.4% of payroll) plus the capital costs of any early retirements based on my advice and using methods and factors issued by us from time to time.

Any employing bodies joining the Fund where they have:

- had a previous interest in the Fund;
- where the number of employee members is significant; or
- where there is no guarantor.

should be referred to us for individual calculation as to the required level of contribution.

Any employing bodies joining the Fund where there is an expectation of a bulk transfer from outside the Fund should be referred to us but initially should pay a contribution of 210% of employees' contributions (equivalent to 12.4% of payroll) subject to any subsequent adjustment as a result of any bulk transfer payment.

Any employer who ceases to participate in the Fund should be referred to us in accordance with Regulation 77.

I would be pleased to answer any question arising from my report.

Yours sincerely

W Douglas B Anderson

Fellow of the Institute of Actuaries

Appendix A – Valuation Method

Valuation of Liabilities

Using my assumptions I estimate the payments which will be made from the Fund throughout the future lifetime of existing employee members, deferred benefit members, pensioners and their dependants. I then calculate the amount of money which, if invested now would be sufficient together with the income and growth in the accumulating assets to make these payments in future, using my assumption about future investment returns.

This amount is called "the present value" (or, more simply, "the value") of members benefits. Separate calculations are made in respect of benefits arising in relation to service before the valuation date ("past service") and for service after the valuation date ("future service").

Past Service Funding Level

A comparison is made of the value of the existing assets with the value of benefits in relation to past service (allowing for future pay and pension increases). If there is an excess of assets over past service liabilities then there is a past service surplus. If the converse applies there is a past service deficiency

Future Service Funding Rate

The first stage is to calculate the value of benefits earned by existing employee members in the future, by reference to projected pay as at the date of retirement or earlier exit. In the valuation I consider the benefits earned in the year following the valuation date. The value of benefits earned in the year following the valuation date is then expressed as a percentage of employee contributions over the same period having first deducted the equivalent contribution paid by the employee members.

The method described above results in a stable, long term contribution rate over time, if the assumptions adopted are borne out in practice and there is a steady flow of new entrants to the Fund. If the admission of new entrants is such that the average age of the membership profile increases then the contribution rate calculated at future valuations would be expected to increase.

Overall Result

Any past service surplus (or deficiency) can be applied to reduce (or increase) the contribution rate payable by the employing bodies over the period following the valuation date.

Name of Method

The method described above is known as the Projected Unit Method of valuation.

Valuation of Assets

Assets have been valued at a 12 month smoothed market value. Where additional contributions to fund previous early retirement costs are due to the Fund at the valuation date I have included these as an asset of the Fund.

Appendix B - Summary of Benefits

Eligibility	Permanent employees
Member Contributions	Officers 6% of earnings Manual Workers 5% of earnings (6% for post 31/3/98 entrants)
Normal Retirement Age Early Retirement	Age 65 or if earlier and a member before 1 April 1998 age 60 or on attaining 25 years pensionable service. Retirement on the grounds of ill-health with enhanced benefits or under other circumstances with possibly reduced benefits may also be allowed.
Pension at Retirement Age	1/80th of pensionable remuneration for each year of pensionable service. Pensionable remuneration is normally the average remuneration in the employee's final year.
Lump Sum at Retirement Age	3/80ths of pensionable remuneration for each year of pensionable service..
Pension Increases	All pensions in payment, deferred pensions and children's pensions other than benefits arising from the payment of additional voluntary contributions are increased annually. That part of pensions which is in excess of the GMP is increased under the Pensions (Increases) Act. That part of the pensions which is GMP increases in accordance with Section 37A of the Pensions Act.
Death in Service Benefits	A lump sum benefit of two times pensionable remuneration at date of death, plus, A spouse's pension of 1/160th of pensionable remuneration for each year of service that the employee would have been able to reckon if he/she had retired on the grounds of ill health at the date of death. (for widowers benefits , only service from 1988 can count unless the employing authority exercises its discretion to extend this to 1972), plus, Children's pensions may also be payable.
Death after Retirement Benefits	A spouse's pension equal to one half of the member's pension (but only service from April 1988 can count for widowers' benefits).
Benefits on Leaving Service	Members who leave service are entitled to either a refund of contributions, a preserved pension payable from normal retirement date, or a transfer payment to another scheme or to an insurance company.
The Scheme is contracted out of the State Second Pension (formerly the State Earnings Related Pension Scheme).	

Appendix C - Valuation Data

A summary of the membership records on which my valuation calculations are based is as follows.

Employee Members

	Number		Pensionable Pay £ (000)		Average Pensionable Pay £ (000)		Average Service		Average Age	
	2002	1999	2002	1999	2002	1999	2002	1999	2002	1999
Male Officers	1,529	2,101	40,432	47,100	26,443	22,418	18.5	16.4	46.5	46.8
Female Officers	2,858	4,110	54,244	60,000	18,980	14,599	12.1	10.3	44.0	44.3
Male Manuals	957	1,236	14,755	16,900	15,418	13,673	15.9	14.3	46.1	47.5
Female Manuals	817	1,220	9,282	8,000	11,361	6,557	5.1	4.7	49.9	51.4
Post 98 Males	1,248	-	21,525	-	17,248		4.1		39.9	
Post 98 Females	3,264	-	44,826	-	13,733		2.4		39.4	
Total	10,673	8,667	185,064	132,000	17,339	15,230	10.2	11.6	44.9	46.4

Pensioners

	Number		Annual Pensions £ (000)		Average £	
	2002	1999	2002	1999	2002	1999
Males	2,360	2,361	10,900	9,618	4,619	4,074
Females	2,448	2,236	5,711	4,592	2,333	2,054
Dependants	925	812	1,703	1,397	1,841	1,720
Total	5,733	5,409	18,314	15,607	3,195	2,885

Deferred Pensioners

	Number		Annual Pensions £ (000)		Average £	
	2002	1999	2002	1999	2002	1999
Males	838	806	1,564	1,411	1,866	1,751
Females	1,620	1,119	2,396	1,280	1,479	1,144
Total	2,458	1,925	3,960	2,691	1,611	1,398

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 2002 PI Order.
3. Pensionable pay is full time equivalent earnings.
4. Pensions for deferred pensioners include increases up to the valuation date.

Details of the assets held at the valuation date and accounts are as follows.

Assets at This Valuation (excluding AVCs)	Market Value at 31 March 2002	
	£(000)	%
UK Equities	301,478	49%
UK Fixed Interest Gilts	10,566	2%
UK Corporate Bonds	29,690	5%
UK Index Linked Gilts	13,257	2%
Overseas Equities	170,067	28%
Overseas Bonds	22,035	4%
Property	51,812	8%
Cash	10,008	2%
Net Current Assets	6,823	1%
TOTAL	**615,736**	**100%**

Revenue Accounts	Year to	March-02 £ (000)	March-01 £ (000)	March-00 £ (000)	TOTAL £ (000)
EXPENDITURE	Retirement Pensions	17,839	17,040	16,249	51,128
	Retirement Lump Sums	2,185	2,893	1,837	6,915
	Death Benefits	366	350	448	1,164
	Transfer Values	3,050	3,431	1,548	8,029
	Refunds / CEPs	141	122	80	343
	Admin Expenses	334	323	309	966
	Investment Expenses	1,678	1,413	955	4,046
	Other Expenditure	-	-	-	-
TOTAL		25,593	25,572	21,426	72,591
INCOME	Employees Ctbns	9,823	8,865	8,187	26,875
	Employers Ctbns	14,175	12,471	9,851	36,497
	Transfer Values	6,259	4,872	6,203	17,334
	Investment Income	17,440	18,355	20,199	55,994
	Other Income	-	-	-	-
TOTAL		47,697	44,563	44,440	136,700
Fund Value					
Assets at Start of Year		603,972	619,739	550,354	550,354
Cashflow		22,104	18,991	23,014	64,109
Change in value		(10,340)	(34,758)	46,371	1,273
Assets at End of Year		615,736	603,972	619,739	615,736
Annual Returns					
Approx Rate of Return		1.2%	-2.7%	12.1%	3.3%
WM LA Median		1.0%	-7.5%	13.0%	1.1%

Appendix D – Membership Data Split by Employer

The membership records – employees, deferred pensioners and pensioners – split by each employer, is as follows.

Employer Code	Employer	Number of Members		
		Employees	Deferred Pensioners	Pensioners
00053	Falkirk Council	4,264	410	2,215
00054	Stirling Council	2,480	345	1,332
00052	Clackmannanshire Council	1,464	177	782
00038	Scottish Environment Protection Agency	861	90	33
00034	Scottish Children's Reporter Admin.	338	41	52
00015	Scottish Society for Autism	277	63	26
00055	Central Scotland Police	251	23	92
00006	Falkirk College	131	31	23
00013	Strathcarron Hospice	103	17	20
00057	Central Scotland Joint Valuation Board	56	11	25
00008	Clackmannan College	56	0	5
00029	Argyll, The Isles, Stirling Tourist Bd	50	9	1
00019	Ceteris	45	10	0
00056	Central Scotland Fire Brigade	44	4	21
00011	Ballikinrain School	39	3	17
00062	Clackmannanshire Leisure Trust	37	1	4
00005	Dollar Academy Trust	36	16	27
00064	Seamab School	24	0	0
00014	Stirling Enterprise Park Limited	18	5	0
00061	Water Industry Commissioner for Scotland	14	3	0
00018	Snowdon School Ltd	12	0	2
00065	McLaren Community Leisure Centre	10	0	0
00022	Association of Scottish Colleges	9	1	0
00028	Smith Art Gallery	8	0	0
00058	St Mary's Episcopal P.S.	7	2	0
00026	Falkirk Women's Technology Centre	6	2	0
00024	Cowane's Hospital	5	0	0
00023	Stirling University Innovation Park Ltd	4	3	0
00031	Alsorts	4	1	0
00036	Central Carers Association	4	1	0
00060	Tourist Board Training	4	0	0
00007	Stirling University	3	4	16
00059	Open Secret	3	0	0
00025	Community Training and Development Unit	2	1	0
00037	Cent Scotland Coun. for Racial Equality	2	1	0
00063	Playplus	2	1	0

Employer Code	Employer	Number of Members Employees	Deferred Pensioners	Pensioners
	Employers with no active members as at 31 March 2002			
00001	Central Regional Council	0	649	798
00002	Clackmannan District Council	0	63	0
00003	Falkirk District Council	0	218	0
00004	Stirling District Council	0	172	0
00009	Snowdon School for Girls (Old)	0	0	1
00010	St Ninians School	0	1	6
00016	CESU	0	3	0
00017	Bo'ness Heritage Trust	0	1	0
00027	Bo'ness Development Trust	0	0	1
00032	Langlees Community Dev. Project	0	2	0
00033	Careers Central Ltd.	0	72	9
00035	BOSS	0	0	0
00039	Scot. Water & Sewerage CC	0	1	0
00090	Aberlour Trust	0	0	1
00092	North Lanarkshire Council	0	0	5
00093	Scottish Executive (NHS Recharge)	0	0	6
00099	ESWA	0	0	213
	Total	**10,673**	**2,458**	**5,733**

Appendix E – Actuarial Assumptions

Financial Assumptions

In a market-related valuation the financial assumptions are derived from market indicators. The principal financial assumptions adopted in the valuation are as follows:

Price Inflation

I derive the market's expectation of inflation by considering the difference in yields available from index-linked gilts and fixed-interest gilts as at the valuation date.

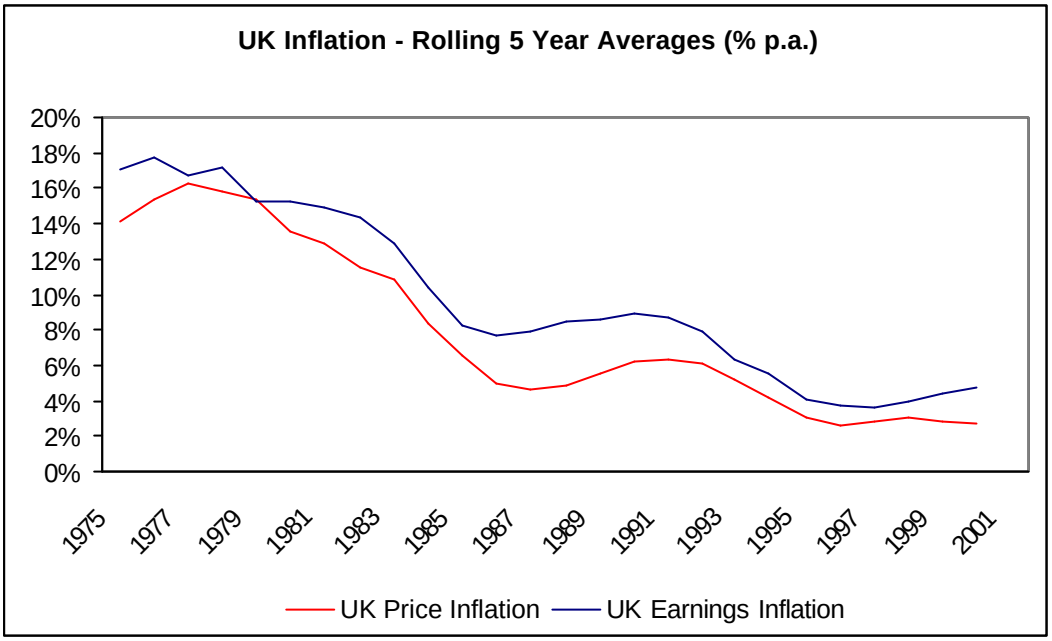
At the previous and current valuation dates the smoothed yields and implied inflation rates were as follows:

Yields Smoothed Over Year to:	Mar 1999 % p.a.	Mar 2002 % p.a.
Conventional gilt yields	5.1%	4.9%
Index Linked gilt yields	2.4%	2.3%
Implying:		
Future price inflation	2.8%	2.6%
Risk-free return (nominal)	5.1%	4.9%
Risk-free return (real)	2.4%	2.3%

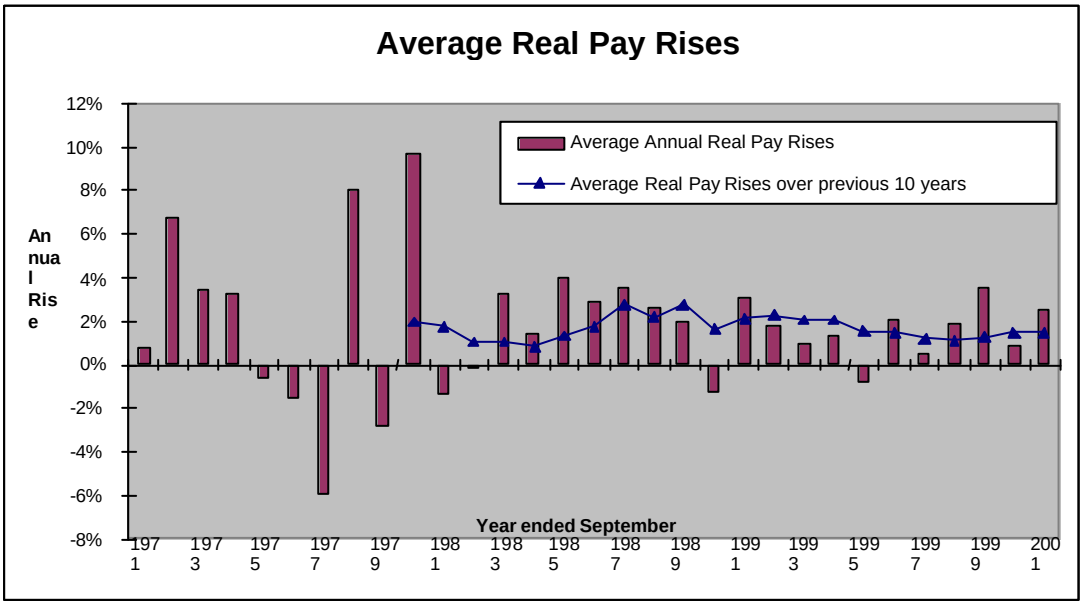
Pay Increases

Having determined my assumption about future levels of price inflation, the next stage is to assess future levels of pay increases *relative to price inflation*.

Historically there is a strong correlation between pay and price inflation as I see in the following chart.



The trend has been that real pay increases have been around 1% to 3% per annum although in recent times there has been a downward trend as actual levels of price inflation have reduced as I see in the next chart.



For this valuation I have retained the same assumption for real pay inflation as was used at the last valuation, i.e. real pay growth of 1.5% p.a. This gives a nominal rate of pay inflation of 4.1% p.a. for this valuation.

Discount Rate/Investment Returns

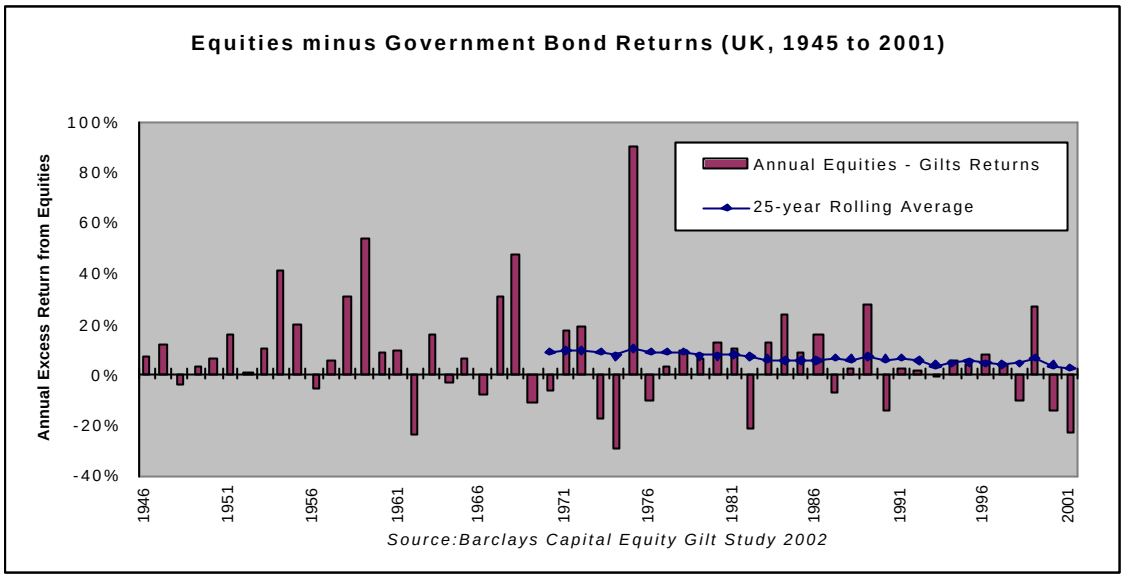
To determine the value of the Fund's liabilities I discount future expected cashflows to a current value using a discount rate. For this valuation, as for the previous valuation, I have derived the discount rate as the expected return on assets.

In a market-related valuation it is necessary to assess future average levels of investment returns in current market conditions. I have derived the discount rate as the expected return underlying a typical long-term investment strategy of 75% in equity type investments and 25% in bonds and cash.

Redemption yields from gilts and bonds give an indication of the market's expectations of long term interest rates and so some indication about future "risk free" rates of return. In the recent past the Government's finances have been such that there have been few new gilt issues. The gilt market has therefore reduced in size. However, a number of financial institutions including insurance companies are required to hold certain levels of gilts for solvency purposes. Demand for gilts has therefore outstripped supply, particularly at the longer end of the market which has contributed to an increase in price and a corresponding reduction in future yields.

The shortage of gilt supply has been partly addressed by a steady increase in the supply of corporate bonds. Within the UK the amount of corporate bonds in issue now exceeds the amount of gilts. As corporate bond yields are usually higher than gilt yields, I propose to make some allowance for this. I propose a margin of 0.5% to represent a "typical" institutional grade corporate bond. Assuming approximately 60% of the overall bond portfolio is corporate bonds and 40% gilts, this gives an overall return on bonds of 5.2% p.a.

There is however no comparable market indicator to derive the market's expected future return from investing in equities at any particular point in time. It is generally accepted however that the expected future return from investing in equities over the longer term should exceed that available from investing in bonds to compensate for the extra risk. This extra expected return is often referred to as the equity risk premium. By comparing yields from bonds and equities it is possible to derive the equity risk premium. As I see from the next chart, since 1945 the return on equities has exceeded the return on government bonds in many years – but not all. In three of the last four years, equities have underperformed bonds, and this has continued in 2002.



I can look at longer term trends by averaging the returns over the period. If I consider the average returns over successive 25 year periods, I see a gradual decline in the outperformance of equities relative to bonds, from around 9% p.a. more than bonds in the 35 years to 1970 to under 3% more than bonds in the 25 years to 2001. Given the further falls in equities in 2002, most of which have occurred after 31 March 2002 year end date, a further fall in the 25 year average for 2002 would be expected, perhaps to as low as 1% more than bonds.

For the purposes of the 2002 valuation I propose to assume that, over the long-term, the fund's equity component will deliver a return of 1.6% per annum more than the risk-free rate of return on gilts.

Assuming a notional overall portfolio of 75% equities and 25% bonds products a discount rate of 6.2% as shown in the table below.

Financial Assumptions	**Mar 2002**	
	% p.a. Nominal	**% p.a. Real**
Anticipated extra long-term return from:		
Equities	1.60%	
Bonds	0.25%	
Overall anticipated long term return from:		
Equities	6.5%	
Bonds	5.2%	
Discount Rate (75% equities/25% bonds):	6.2%	3.6%
General Pay Increases (before age-related scale)	4.1%	1.5%
Price Inflation/Pension Increases	2.6%	0.0%

Demographic Assumptions

The assumptions I have adopted are based on my analysis of the incidence of retirement, and withdrawal of our Local Government client funds. The mortality assumptions are based on published mortality tables. Sample rates are shown in the following tables:

Age	Incidence per 1000 active members per annum						Promotional Salary Scales	
	Male Officers & Post 98 Males			Female Officers and Post 98 Females			Male Officers & Post 98 Males	Female Officers & Post 98 Females
	Death	Ill Health Retirement	Withdrawal (Ultimate)	Death	Ill Health Retirement	Withdrawal (Ultimate)		
20	0.5	-	150	0.2	-	154	113	108
25	0.5	-	101	0.2	0.6	162	160	137
30	0.6	0.6	62	0.3	1.0	138	206	161
35	0.7	0.8	42	0.5	2.0	95	232	171
40	1.2	1.4	31	0.8	2.6	64	255	183
45	2.0	3.2	24	1.3	4.2	49	266	193
50	3.2	8.8	18	1.9	8.2	39	278	203
55	5.0	18.0	13	2.5	21.6	32	276	201
60	9.0	36.0	-	3.2	-	-	273	200

Age	Incidence per 1000 active members per annum						Promotional Salary Scales	
	Male Manuals			Female Manuals			Male Manuals	Female Manuals
	Death	Ill Health Retirement	Withdrawal (Ultimate)	Death	Ill Health Retirement	Withdrawal (Ultimate)		
20	0.9	-	153	0.2	-	247	103	103
25	1.0	3.2	119	0.2	2.6	244	116	117
30	1.1	5.2	90	0.3	3.6	193	127	126
35	1.2	7.8	70	0.5	5.2	140	135	133

Age	Incidence per 1000 active members per annum						Promotional Salary Scales	
	Male Manuals			Female Manuals			Male Manuals	Female Manuals
	Death	Ill Health Retirement	Withdrawal (Ultimate)	Death	Ill Health Retirement	Withdrawal (Ultimate)		
40	1.7	10.8	56	0.8	7.2	106	142	140
45	2.9	15.6	42	1.4	9.2	81	145	143
50	5.3	22.8	28	2.2	13.6	60	146	145
55	7.8	36.8	20	3.0	25.6	47	146	145
60	11.0	70.0	-	4.4	-	-	146	145

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	-	PA92 c2002 + 1 year
	Prospective Pensioners		PA92 c2002
	Ill Health Retirement	-	As above with + 4 years
Proportions Married (including a loading for dependants[1] benefits)	90% of members will be married and entitled to a spouse's pension		
Wife/Husband Age Difference	Husbands are assumed to be 3 years older than their wives		

Appendix F – Rates and Adjustments Certificate

Falkirk Council
Municipal Buildings
FALKIRK
FK1 5ZF

Dear Sirs

1. On your instruction, I have made an actuarial valuation of the Falkirk Council Pension Fund ("the Fund") as at 31 March 2002.

2. In accordance with Regulation 76 of the Local Government Pension Scheme (Scotland) Regulations 1998 I have made an assessment of the contributions which should be paid to the Pension Fund by the employing authorities as from 1 April 2003 in order to maintain the solvency of the Fund.

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

Yours faithfully

Fellow of the Institute of Actuaries

Hymans Robertson
221 West George Street
GLASGOW
G2 2ND

STATEMENT TO THE RATES AND ADJUSTMENTS CERTIFICATE

The Common Rates of Contribution payable by each employing authority under Regulation 76 for the period 1 April 2003 to 31 March 2006 are as set out below:-

Financial Year	Minimum Employer Contributions		Ill Health Threshold	
	(% of payroll)	(% of employees' contributions)	(% of payroll)	(% of employees' contributions)
2003/2004	10.0%	170%	1.5%	25%
2004/2005	11.2%	190%	1.5%	25%
2005/2006	12.3%	210%	1.5%	25%

Individual Adjustments under Regulation 76 for the period 1 April 2003 to 31 March 2006 resulting in ***Minimum*** Employer Contribution Rates expressed as a percentage of payroll and percentage of employees' contributions are as set out below:-

Employer Code	Employer	Minimum Contribution for the Year ending 31 March 2004		31 March 2005		31 March 2006	
		% payroll	% employees' contributions	% payroll	% employees' contributions	% payroll	% employees' contributions
00053	Falkirk Council	9.8%	170%	11.0%	190%	12.2%	210%
00054	Stirling Council	9.9%	170%	11.1%	190%	12.2%	210%
00052	Clackmannanshire Council	9.8%	170%	10.9%	190%	12.1%	210%
00038	Scottish Environment Protection Agency	9.6%	160%	10.8%	180%	12.0%	200%
00034	Scottish Children's Reporter Admin.	12.6%	210%	13.8%	230%	15.0%	250%
00015	Scottish Society for Autism	10.1%	170%	11.3%	190%	12.5%	210%
00055	Central Scotland Police	10.1%	170%	11.3%	190%	12.5%	210%
00006	Falkirk College	10.1%	170%	11.3%	190%	12.5%	210%

Employer Code	Employer	Minimum Contribution for the Year ending 31 March 2004		31 March 2005		31 March 2006	
		% payroll	% employees' contributions	% payroll	% employees' contributions	% payroll	% employees' contributions
00013	Strathcarron Hospice	10.1%	170%	11.3%	190%	12.5%	210%
00057	Central Scotland Joint Valuation Board	10.2%	170%	11.4%	190%	12.6%	210%
00008	Clackmannan College	10.0%	170%	11.2%	190%	12.4%	210%
00029	Argyll, The Isles, Stirling Tourist Bd	10.1%	170%	11.3%	190%	12.5%	210%
00019	Ceteris	10.2%	170%	11.4%	190%	12.6%	210%
00056	Central Scotland Fire Brigade	10.0%	170%	11.1%	190%	12.3%	210%
00011	Ballikinrain School	10.1%	170%	11.3%	190%	12.5%	210%
00062	Clackmannanshire Leisure Trust	9.7%	170%	10.9%	190%	12.0%	210%
00005	Dollar Academy Trust	9.8%	170%	11.0%	190%	12.1%	210%
00064	Seamab School	12.6%	210%	13.2%	220%	13.8%	230%
00014	Stirling Enterprise Park Limited	10.2%	170%	11.4%	190%	12.6%	210%
00061	Water Industry Commissioner for Scotland	10.2%	170%	11.4%	190%	12.6%	210%
00018	Snowdon School Ltd	10.2%	170%	11.4%	190%	12.6%	210%
00065	McLaren Community Leisure Centre	10.2%	170%	11.4%	190%	12.6%	210%
00022	Association of Scottish Colleges	10.2%	170%	11.4%	190%	12.6%	210%
00028	Smith Art Gallery	9.8%	170%	10.9%	190%	12.1%	210%
00058	St Mary's Episcopal P.S.	10.2%	170%	11.4%	190%	12.6%	210%
00026	Falkirk Women's Technology Centre	10.2%	170%	11.4%	190%	12.6%	210%
00024	Cowane's Hospital	10.2%	170%	11.4%	190%	12.6%	210%
00023	Stirling University Innovation Park Ltd	10.2%	170%	11.4%	190%	12.6%	210%
00031	Alsorts	10.2%	170%	11.4%	190%	12.6%	210%
00036	Central Carers Association	10.2%	170%	11.4%	190%	12.6%	210%
00060	Tourist Board Training	10.2%	170%	11.4%	190%	12.6%	210%
00007	Stirling University	10.2%	170%	11.4%	190%	12.6%	210%
00059	Open Secret	10.2%	170%	11.4%	190%	12.6%	210%

Employer Code	Employer	Minimum Contribution for the Year ending 31 March 2004		31 March 2005		31 March 2006	
		% payroll	% employees' contributions	% payroll	% employees' contributions	% payroll	% employees' contributions
00025	Community Training and Development Unit	10.2%	170%	11.4%	190%	12.6%	210%
00037	Cent Scotland Coun. for Racial Equality	10.2%	170%	11.4%	190%	12.6%	210%
00063	Playplus	10.2%	170%	11.4%	190%	12.6%	210%

Notes

Further sums should be paid to the Fund to meet the costs of any non-ill-health early retirements on unreduced benefits using methods and assumption issued by me from time to time.
The administering authority should monitor each employer's ill health experience on an annual basis and if the costs exceed the threshold shown above, should seek additional capital payments.
The assumptions underlying the number of members who will become entitled to pensions under the provisions of the Scheme and the liabilities arising in respect of such members are set out in Appendix E.

Appendix G – Surplus Certificate

This certificate is given to the Commissioners of Inland Revenue for the purposes of paragraph 2 of Schedule 22 to the Income and Corporation Taxes Act 1988.

Name/description of scheme	Falkirk Council Pension Fund
Inland Revenue Reference Number	49/22778

I hereby certify that :-

1. in my opinion, as at 31 March 2002 the value of the assets of the scheme did not exceed 105 percent of the value of the liabilities of the scheme;

2. the assets and liabilities to which paragraph (1) refers have been determined in accordance with principles and requirements prescribed by the Pension Scheme Surpluses (Valuation) Regulations 1987.

Name W Douglas B Anderson FIA Qualification: FIA

Date February 2003

Address Hymans Robertson
221 West George Street
GLASGOW
G2 2ND