

APPENDIX

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WICC03.VAL

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Dear Mr Prince

Wiltshire Pension Fund
Interim Valuation as at 31 March 2003

As requested, I have carried out an interim actuarial valuation of the Wiltshire Pension Fund ("the Fund") as at 31 March 2003 for Wiltshire County Council in its role as Administering Authority for the Fund.

The principal purpose of the interim valuation is to estimate the financial position of the Fund as at the interim valuation date. This is based on the results of the previous full valuation as at 31 March 2001 and global factors that have affected the Fund since then. I illustrate the approximate effect of equity market falls to 31 March 2003 on the Fund and the future contribution rate.

For the avoidance of doubt, this interim and informal valuation does not fully comply with the requirements of Guidance Note 9 of the Institute and Faculty of Actuaries.

Scope

For the purpose of this exercise, I have restricted my consideration to an analysis of the effect of macro investment factors on the Common Rate of employers' contributions and not the individual rates paid by different employers.

Wiltshire Pension Fund currently operates the same investment strategy for all employers. The effect of investment under-performance will vary between employers according to their maturity. The mature employers, with large pension liabilities and relatively small payrolls, have contribution rates which are more highly geared to investment performance (whether good, or bad). Conversely, the contributions of immature employers, with only active members' liabilities, are less exposed to investment performance.

Data

I have used the following main items of data for this interim valuation:

- the results of the previous valuation; and
- the annual report and accounts for the Fund for the year to 31 March 2002, plus the unaudited accounts for the year to 31 March 2003.

Interim Valuation Method

In order to estimate the financial position of the Fund as at the valuation date, the process is to roll forward the results of the previous valuation allowing for the effects of some of the major factors, that influence the funding position, as follows:

- the actual investment returns achieved by the Fund, as measured for actuarial purposes, relative to the assumptions made at the previous valuation;
- the actual level of contributions paid compared to the cost of additional benefits being earned (noting that some employers have been contributing at levels significantly higher than the cost of accruals);
- differences between actual and assumed pension increases; and
- any changes in market conditions since the previous valuation.

No allowance is made in the estimated 2003 liabilities for actual pay increases and other experience factors such as ill-health early retirement experience and other premature early retirements for which the employers may have made capital contributions. It is assumed that individual and bulk transfers have had a neutral effect on the funding position.

Statistical Assumptions

I have left the statistical assumptions used at the last valuation unchanged. More details concerning those assumptions is in the actuarial valuation report completed as at 31 March 2001.

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Financial Assumptions

The assumptions are based on market indicators, such as gilt yields and inflationary expectations, averaged over a 12-month period prior to the valuation date.

Smoothed	31 March 2001		31 March 2003		31 March 2003		31 March 2003	
Basis	1		2 (2001 Rebased) 6.5% Return		3 (More Prudent) 6% Return		4 (More Optimistic) 7% Return	
Financial Assumptions (Current Market Conditions)	Nominal % p.a.	Real % p.a.	Nominal % p.a.	Real % p.a.	Nominal % p.a.	Real % p.a.	Nominal % p.a.	Real % p.a.
Investment Return								
Equities	6.25%	3.45%	7.00%	4.40%	6.30%	3.70%	7.70%	5.10%
Bonds	5.25%	2.45%	5.00%	2.40%	5.00%	2.40%	5.00%	2.40%
75% Equities / 25% Bonds	6.00%	3.20%	6.50%	3.90%	6.00%	3.40%	7.00%	4.40%
Pay Increases (excl increments)	4.30%	1.50%	4.10%	1.50%	4.10%	1.50%	4.10%	1.50%
Price Inflation / Pension Increases	2.80%	0.00%	2.60%	0.00%	2.60%	0.00%	2.60%	0.00%

By averaging, I am building an element of *smoothing* in to the valuation results over time. Smoothing of the values of assets and of the rates used to value the liabilities means that I am not looking at the position of the Fund at one particular date. The position is smoothed over the previous 12 months. This smooths out the peaks and troughs for asset values and produces a smoothed market rate to discount the liabilities.

The results in this report have been based on three different scenarios. The financial assumptions underlying those scenarios and the assumptions used at the last full valuation are set out below:

I have used three bases to reflect the differing opinions regarding future returns from equities. Using the same principles as underpinned the 2001 valuation in today's market conditions would imply a long-term return on equities of around 7% pa. This is around 2.25% pa more than the risk-free rate of return (after expenses) and is broadly in line with the best-estimate of long-term equity returns. Therefore, there is an even chance of the actual returns being higher or lower than this figure. After allowing for bonds, the anticipated investment return is 6.5%pa.

I have also illustrated a more optimistic estimate of future investment returns (Basis 4 - 7%pa) and a prudent estimate of future investment returns (Basis 3 - 6% p.a.).

The key assumption for valuing liabilities is the real rate of return, net of assumed price increases. The value of this assumption has increased from 3.20% pa at the latest formal valuation to 3.9% pa at this interim valuation under Basis 2. This effect of this increase is to place a lower value on the accrued and prospective liabilities. The decrease would be of the order of 7% to 8% for pensions in payment and 14% to 16% for non-pensioners.

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If I were to assume different rates of return on the fund's assets, different pictures will emerge. I have illustrated the impact of increasing and decreasing the assumed rate of return by 0.5% per annum under Bases 3 and 4. The results of these changes can be seen in the table below (under results)

Valuation of Assets

At the previous valuation, the asset value was calculated as the "moving average" over the previous twelve months. This value of assets was 102% of the market value of assets at 31 March 2001.

If I were to smooth asset values over the twelve months up to and including the interim valuation date, the "write-up" of the asset value would be in the region of 11%. Equity market values have increased since 31 March 2003 since this could form the basis of an argument to use a higher write-up of the asset value, therefore I have increased the market value of assets by 11% for the purpose of this valuation. This level of smoothing may change at the time of the next full valuation.

Investment Performance

Fund performance since 1 April 2001 appears to be broadly in line with other LGPS funds, however, this does not hide the very disappointing returns in absolute terms.

I estimate that the actual performance of the fund from 1 April 2001 to 31 March 2003 was -20.9%. Over the same period, the assumed return built into the liabilities was +12.4%. The actual investment return is therefore some 33% less than the assumed rate of return. This obviously has a significant impact on the funding level.

Sensitivity Issues

I have also considered three sensitivity points at the whole fund level:

1. the estimated current funding position, using identical financial assumptions to those for the 2001 valuation and considering changing the assumption regarding the expected out-performance of equities over gilts (+/- 0.5% pa);
2. estimating the effect of each 5% fall in funding levels on the common contribution rate, to assess the level of gearing; and
3. estimating the effect of altering the deficit spreading period.

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Results

1. Estimated Current Funding Position

The table below shows my summary of the estimated funding position as at 31 March 2003 using a variety of bases. I have also shown the results of the 2001 valuation:

Valuation Date	31 March 2001	31 March 2003	31 March 2003	31 March 2003
Basis	1 (2001 Basis)	2	3	4
Assets	Smoothed	Smoothed	Smoothed	Smoothed
Discount Rate	Smoothed	6.5% return	6% return	7% return
Past Service Liabilities	£m	£m	£m	£m
Employee Members	355.1	416.5	458.5	378.5
Deferred Pensioners	103.6	99.3	109.4	90.2
Pensioners	326.9	283.8	298.0	270.5
Total	785.6	799.6	865.9	739.1
Smoothed Asset Value	629.6	606.6	606.6	606.6
Surplus/(Deficit)	(156.0)	(193.0)	(259.3)	(132.5)
Funding Level	80.1%	75.9%	70.1%	82.1%
Employer Contributions	% of employees' contributions			
Future Service Funding Rate	225%	210%	225%	195%
Past Service Adjustment (over 14 years)	120%	155%	200%	110%
Total Contribution Rate	345%	365%	425%	305%

I have outlined below a brief explanation of the various bases:

1. The valuation results at 31 March 2001.
2. The valuation results at 31 March 2003, applying the 2001 basis in today's conditions (6.5% p.a.).
3. The valuation results at 31 March 2003, using a more prudent estimate of future investment returns (6% p.a.) and current market expectations for price inflation.
4. The valuation results at 31 March 2003, using a more optimistic estimate of future long term investment returns (7% p.a.) and current market expectations for price inflation.

The clearest comment to make is that if there were to be no changes to the financial basis between the two valuation dates, the funding level at 31 March 2003 would fall to around 76% (Basis 2) from 80% (Basis 1) as at 31 March 2003. This fall is smaller than may have been expected from looking at investment returns in isolation, because of the lower value placed on liabilities (higher anticipated future returns), the lower than assumed pension increases and employers' contributions exceeding the cost of accruals by a substantial margin.

The financial basis used for Results 1 and Results 2 indicates an approximate equity out-performance over gilts of 1.75%pa. Results 3 and Results 4 show the impact of reducing to 1.25%pa and increasing to 2.25%pa respectively this out-performance. As would be expected, the reduction in assumed equity returns leads to an increase in the value of liabilities, which, in turn, leads to a decrease in the funding level to 68%. However, the increase in the assumed rate of return for Results 4 would improve the funding level to 80%.

It is also important to consider the impact on the contribution rate. Applying the slightly higher anticipated future returns of the 2001 basis in today's market conditions leads to the Future Service Contribution Rate falling by around 15 percentage points. An increase in the equity out-performance assumption under Basis 4 reduces the rate to 195% of employees' contributions, whereas, the decrease in the equity out-performance assumption shown under basis 3 leaves it unchanged at 225% of employee contributions.

2. Gearing of Employer Contributions to Investment Underperformance

It can be seen from the table above that a fall in the funding level of 4 percentage points would translate into an increase in employer contributions of 20% of employees' contributions, if the same approach were adopted as in 2001.

Thus, in broad terms, each 5% fall in funding level is broadly equivalent to adding an extra 25% of employees' contributions onto employer contributions for the average employer. However, the effect will vary from employer to employer depending on their maturity profile and each employer's own experience of non-investment factors.

In particular, these figures do not have regard to different starting positions of different employers and particularly the pre-Local Government reorganisation liabilities.

3. Extending the Deficit Spreading Period

The Administering Authority may consider it reasonable to spread the deficit over a longer period. At the last valuation, the deficit was spread over a period of 14 years.

There is no prescribed period over which the recovery of deficits should be targeted. This is ultimately a matter of professional judgement.

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Longer deficit spreading periods may be acceptable to the administering authority, if the security of the employer covenant is considered acceptable. Whilst the security of benefits for Local Authority employees is guaranteed, this may mean that different approaches are used for different employers, particularly for certain Admission Bodies.

I have shown below the impact on the Past Service Adjustment of spreading the deficit over different periods for each of Results 2, 3 and 4. In all cases it is assumed that the payroll remains stable in real terms, with new recruits replacing leavers and average earnings rising at 1.5%pa more than RPI.

Results 2

The table below illustrates the effect on the past service adjustment of extending the spreading period for the deficit of £193m shown under Basis 2 above.

Basis 2 Employer Contributions	Length of Spreading Period			
	9 years	14 years	20 years	25 years
	% of employees' contributions			
Future Service Funding Rate	210%	210%	210%	210%
Past Service Adjustment	230%	155%	115%	95%
Total Contribution Rate	440%	365%	325%	305%

The table shows the progressively smaller reduction in contributions derived from extending the deficit recovery period. This is because of the greater assumed build up of interest on the deficit.

Results 3

The table below illustrates the effect on the past service adjustment of extending the spreading period for the deficit of £259.3m shown under Basis 3 above.

Basis 3 Employer Contributions	Length of Spreading Period			
	9 years	14 years	20 years	25 years
	% of employees' contributions			
Future Service Funding Rate	225%	225%	225%	225%
Past Service Adjustment	305%	200%	145%	120%
Total Contribution Rate	530%	425%	370%	345%

Results 4

The table below illustrates the effect on the past service adjustment of extending the spreading period for the deficit of £132.5m shown under Basis 4 above.

Basis 4 Employer Contributions	Length of Spreading Period			
	9 years	14 years	20 years	25 years
	% of employees' contributions			
Future Service Funding Rate	195%	195%	195%	195%
Past Service Adjustment	160%	110%	80%	70%
Total Contribution Rate	355%	305%	275%	265%

Commentary on Results

Essentially there is a balance to be struck between either *low* or *stable* employer contributions in setting the actuarial basis (and, of course, in determining the investment strategy). These two desirable objectives are largely incompatible, although the choice of funding method can be used to reduce some of the instability if the employer covenant is not in question.

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The estimated position revealed above does however suggest that the consequences of the fall in equity markets for employer contributions may be less than the Pension Fund Committee may have feared. The explanation for the better than expected outcome appears to be the result of a combination of factors, including:

- the release of the prudential margins built into the 2001 valuation of liabilities (i.e. adopting less prudent assumptions for valuing liabilities at this interim valuation);
- the smoothing of assets, which leads to assets being written up by 11% as at 31 March 2003;
- employer contributions being higher than the cost of new accruals of benefits;
- lower pension increase awards in 2002 and 2003 than assumed in 2001; and
- the Fund being less than fully funded at the time of the equity market falls.

Cautionary Notes

It is not possible to predict the experience for the remaining period up to 31 March 2004. The valuation of assets effectively already takes credit for the Q2 2003 recovery in equity markets. The valuation results anticipate further returns of around 6% up to 31 March 2004. If these are not achieved the funding position would be expected to be lower (if they are higher, then the funding position may be better).

I have not been able to allow for the difference between assumed and actual demographic experience.

There is no allowance in the pensioner liabilities for the strain on fund costs of premature retirements.

The change in contributions for some employers is likely to be substantially different for some employers due to their larger liabilities relative to their payroll and the treatment of pre Local Government reorganisation liabilities.

I have used the same mortality assumptions as adopted for the 2001 valuation. It may be necessary to make further strengthening in 2004.

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Employer Reminders

You may care to raise with employers the following three points:

- Remind employers of their ability to make higher contributions (the 2001 valuation expressed rates as minimum rates) to help reduce the scale of the jump in contributions following the 2004 valuation.
- Remind employers of the high cost of ill-health (and other) early retirements, which should be minimised.
- Ensure that no Admission Bodies seek to terminate their Admission Agreements without assessing any deficit and requiring a capital payment to make good the shortfall (note that the liabilities would probably be valued on more prudent assumptions than those used for ongoing employers, leading to bigger deficits than on the ongoing basis).

I trust that this report is helpful. If there are any specific questions you have as a result of anything in the report, I would be delighted to discuss them further.

Yours sincerely

W Douglas B Anderson FIA