

LOCAL PENSION COMMITTEE – 26TH FEBRUARY 2016

REPORT OF THE DIRECTOR OF CORPORATE RESOURCES

**RECOMMENDED METHOD OF DERIVING KEY ACTUARIAL ASSUMPTIONS FOR
2016 ACTUARIAL VALUATION**

Purpose of the Report

1. To recommend to the Committee a method of deriving some of the key assumptions that will be used as part of the actuarial valuation of the Leicestershire Fund based on the position at 31st March 2016.

Background to the actuarial valuation

2. Each Local Government Pension Scheme (LGPS) administering authority has a statutory obligation to have an actuarial valuation carried out every three years, and all Funds in England and Wales need to have a valuation carried out as at 31st March 2016. Leicestershire County Council Pension Fund's actuarial valuation will be carried out by Barry McKay of Hymans Robertson LLP.
3. The major purpose of the actuarial valuation is for the actuary to set employer contributions rates for a three year period that commences one year after the valuation date (i.e. for the period 1st April 2017 to 31st March 2020). In order to set these contribution rates the actuary must take account of a large number of factors, most of which are assumptions of what will happen in the future. In reality these assumptions do not impact onto the ultimate cost of paying benefits, and they impact the pace of funding which in turn impacts the level of contributions set.
4. Throughout the whole actuarial process the actuary has a professional responsibility to certify contribution rates that are considered reasonable. There is also a requirement within the LGPS Regulations that there is an element of prudence built into the actuarial assumptions and that the actuary sets contributions in line with these prudent assumptions but that are also as stable as possible.

Why the assumptions are important

5. One part of an actuarial valuation is an assessment of how the current value of assets held compares to the current value of accrued liabilities – this produces a 'funding level' (i.e. to what extent assets meet accrued liabilities). Whilst the value of assets is a relatively straightforward – it is simply the market value of all assets held by the Fund at the date of the actuarial valuation – the calculation of the liability value is more complex.
6. The value of accrued liabilities could be described as the amount of assets required *on the actuarial valuation date* that would, if all the actuarial assumptions proved to be absolutely accurate, ensure that every benefit was paid with neither a surplus

nor a deficit remaining when the last member dies – in effect, the accrued liabilities are the net present value of future benefit payments. But the assumptions made about the future can have a material impact onto the value calculated for the liabilities that have already accrued.

7. It is often easier to use examples to illustrate the impact that the assumptions have on the accrued liability value:

Future investment return (often referred to as 'discount rate')

Assume that there is a single payment of £1m required 20 years into the future. If the future investment return is assumed to be 4% p.a. a capital sum of £456,400 is required now, because this amount will produce a £1m sum in 20 years' time at a 4% compounded investment return.

If an investment return of 5% is assumed, only £376,900 is required.

If the assets held are valued at £300,000 the funding level is 65.7% at a 4% discount rate, or 79.6% at a 5% discount rate. More importantly, the deficit that needs to be recouped via employers' contribution rates is either £156,400 or £76,900 – a strikingly large difference for a relatively small liability.

Future inflation

If the Fund has a £1m single payment to make in 20 years that must be increased in line with inflation over this period, and if inflation is assumed to be 2.5% p.a., it will become £1,639,000. Assuming a future investment return of 4% p.a. means that £748,000 is required now.

If inflation was 2.0% p.a. the cash sum required in 20 years reduces to £1,486,000. Using the same 4% p.a. investment return means that £678,000 is required now.

Pay growth

Members' benefits pre 1st April 2014 are linked to their salary at retirement. After this date the LGPS moved to a Career Average Revalued Earnings scheme (CARE). Assuming inflation is nil over the next 20 years and that £1m is due at the end of this period. If it is assumed that pay growth will be the same as inflation (i.e. nil), the £1m will not grow as a liability. At a future investment return of 4% p.a., £456,400 is required today to meet the future liability.

Using all the same assumptions but pay growth of 1% p.a. (i.e. 22% over 20 years, due to compounding), the sum required in 20 years will be £1,220,000. At the same 4% p.a. future investment return, £556,800 is required today.

8. The above examples are simplistic and used only as an example of how assumptions impact on the value of accrued liabilities, and hence the funding level and the deficit. In the vast majority of cases liabilities are not met by the payment of a single lump sum – there will usually (but not always) be a lump sum paid as a retirement grant, and this will be followed by many years of monthly pensions payments. These pension payments will be increased annually in line with Consumer Price Inflation, and possibly be followed by a dependant's pension and/or

a death grant. The actuarial valuation takes account of the expected payments and is a far more complicated matter than these examples would suggest.

9. The examples given are also not the only assumptions that are relevant to the outcome of an actuarial valuation. Life expectancy is an important factor, as it is an indication of how long benefits will be payable for. Assumptions about pay growth that is over-and-above the more normal 'cost of living' increases will impact on all pre-2014 benefits – in effect an allowance has to be made for what could broadly be described as career progression. Many other factors also have an influence, but it is the assumptions for future investment growth, future inflation and future pay rises that have the biggest influence on the value that is calculated for accrued liabilities.

Impact of assumptions on employers' contribution rates

10. The reality of an actuarial valuation is that it is not realistically possible to accurately estimate what benefits the Fund will ultimately have to pay, given the many variables that impact on the benefits. But an actuarial valuation is at least an attempt to try to quantify the estimated costs and, importantly, to ensure that contributions paid into the Fund give a high probability that the ultimate objective (to pay every benefit earned by members) can be achieved without any undue surprises somewhere down the line. The actuarial valuation cannot accurately predict how much money the Fund will ultimately need, but it is important in ensuring that the pace of funding these future payments is relatively stable.
11. The assumptions used impact not only on the value of accrued liabilities, and hence on the deficit, but also the amount of money that needs to be paid as part of the employers' contributions to recoup this deficit over an appropriate length of time. In addition, the assumptions also impact on the cost to employers of paying for future service as it accrues. A higher investment return assumption, for example, means that more of the future cost will be met by investment returns and that employers' contributions for future service will not be as high as they would be with a lower investment return assumption. Assumptions deliberately designed to give a better outcome (e.g. higher return assumptions, lower inflation assumptions) are doubly-beneficial as they reduce the amount of deficit that needs to be paid via employers' contribution rates, and also reduce the cost of paying for future service. This places more emphasis on the assets providing higher returns to subsidise the reduced contribution rates set.
12. Employers in the Fund will ultimately have to pay whatever amounts are required to meet their specific liabilities. The Fund has three items of 'income' – employee contributions (laid out in the LGPS Regulations), investment returns and employer contributions. It is employer contributions that will pay for what the other two do not meet. Paying lower-than-justified contributions in the short-term will lead to higher-than-needed contributions in the future. Lost investment returns due to having less assets in the Fund will, in effect, have to be met by further employer contributions in the future. Using unreasonably beneficial actuarial assumptions may improve the published funding level, and hence lead to lower employer contribution rates than would otherwise be the case, but this delays the inevitable and makes the future situation worse. What is not paid now will have to be paid in the future, but with interest.

13. Hymans Robertson's presentation on today's agenda gives a very clear example (slides 16 and 17) of how it is possible to use actuarial assumptions to arrive at a more acceptable outcome. There are circumstances in which different assumptions are justified – for example a different asset structure should be expected to produce different assumptions for future investment returns – but there is little doubt that some LGPS Funds have very little prudence within their overall assumptions, and hence no 'buffer' in the event of a disappointing outcome. In an environment of austerity across the public sector, there may be a temptation for some administering authorities to 'massage' the assumptions so as to arrive at employers' contribution rates that are lower than they might otherwise be, thereby freeing-up cash for use in other areas. This is a short-sighted approach, and will simply store up much bigger problems for the future.
14. There have been isolated incidents in recent years of individual employers raising objections/queries about the actuarial assumptions used within the valuation, despite these assumptions having been agreed as appropriate between the administering authority and the actuary. This has never happened within the Leicestershire Fund and there is no expectation that it will, but were it to happen it would take up a sizeable amount of officer and actuary time.
15. In order to engage the Local Pension Committee more fully with the actuarial valuation – an actuarial valuation that will impact onto their own body via the employers' contribution rates that are set – it is considered appropriate to agree how the three key actuarial assumptions (discount rate, inflation, pay growth) will be derived in advance of the actuarial valuation. Doing this will ensure that temptation to adjust the assumptions once the outcome of the valuation is known does not exist and that the decisions made are in the best long-term interests of both the Fund and employing bodies, rather than retaining scope to manipulate the outcome to arrive at a more acceptable outcome for employing bodies.

Pragmatism in setting employers' contribution rates

16. The actuarial valuation will ultimately produce employers' contribution rates for all 200+ employing bodies within the Fund for the period 1st April 2017 to 31st March 2020. These contribution rates will take account of the particular circumstances of each employing body, and the rates will be a combination of the cost of paying for future service as it accrues plus an adjustment for paying off the deficit over an appropriate period of time. The appropriate period of time will vary depending on the nature of the employing body, but for those that are tax-raising bodies or are considered part of the machinery of the public sector it is likely to be 20 years. Other employers, such as transferee admission bodies (i.e. those with outsourced contracts from tax-raising bodies) will have lower deficit spreading periods that are relevant to them (e.g. remaining life of the contract). There may be the odd anomalous employer that actually has a surplus within their sub-fund, and in this case their surplus will be amortised (by reducing their employer contribution rate to below the cost of future service) over an appropriate period of time.
17. Whilst it is difficult for employing bodies to meet high costs of employers' contribution rates, it is volatility (particularly significant increases) that is even more difficult to deal with. Increases in employers' contribution rates from 20% to 25% in one year would inevitably cause a major issue. As a result the Fund and the actuary have introduced a system whereby contribution rates are set in a pragmatic and

risk-assessed way, so that the year-on-year impact of changes in contribution rates is more manageable for employers.

18. At the 2013 actuarial valuation, the majority of employers had contribution rates certified that did not reach, during the three years covered by the rates, the full cost (including deficit repayment amounts) that were calculated as being required. All employing bodies were, however, meeting the cost of future service and making some contribution towards repaying the deficit. This approach was required as a result of financial necessity, but the risks of allowing this approach had been carefully considered. In effect it was almost inevitable that the 2016 actuarial valuation would see further upward movements in employers' contribution rates, unless underlying financial circumstances changed considerably for the better. Circumstances have not got any better over the last three years.
19. Hymans Robertson have a modelling tool which was used in both the 2010 and 2013 actuarial valuation, called comPASS, that can assess contribution rate strategies over the long-term and judge whether they are likely to be sufficient, on the balance of probability, to return the sub-fund of an individual employer to a fully funded position (i.e. enough assets to meet accrued liabilities) within the agreed deficit spreading period. In order to do this the modeller uses thousands of different potential outcomes (investment returns, inflation etc.), thereby giving a very robust result.
20. An example of an input into comPASS from a contribution strategy perspective would be that employer contribution rates do not go up by more than 1% p.a. over the agreed period, but will also never reduce by more than ½% p.a. over the same period. In effect the model is calculating whether an employer that underpays over the next three years (because their rate is below the theoretical rate calculated within the actuarial valuation process) can 'balance off' this underpayment by future overpayments, as they will not see such large future reductions if the costs reduce in the future.
21. In reality comPASS inputs can be rebased at each actuarial valuation, so are adaptable to changing circumstances. If, for example, gilts yields rose by 2% over the next three years and the discount rate went up to such an extent that the value of accrued liabilities reduced substantially, the contribution strategy could be amended accordingly. The contribution rate strategy is not 'set in stone' forever.

Balance between actuarial assumptions and pragmatism in setting contribution rates

22. Using actuarial assumptions that include no prudence (and perhaps even stray into the realms of imprudence) gives an appearance of a stronger financial position for the Fund and potentially lower employer contribution rates than would otherwise be the case. But this undoubtedly stores up considerable problems, and additional cost, for the future. This is not in any employer's long-term financial interest.
23. It is considered much more sensible to use reasonable actuarial assumptions and to use the comPASS modeller to arrive at individual employer contribution rates that have been rigorously assessed as being sufficient to give a high probability of each sub-fund becoming fully funded over an appropriate period.

24. This approach will lead to the Leicestershire Fund looking less well funded than some Funds that use less prudent assumptions, but the Fund should not be concerned about this – what is important is that we take a sensible approach to the issues being faced, and take decisions which do not bring significant future financial risks. The LGPS Scheme Advisory Board will be producing actuarial valuation outcomes on a consistent basis in late 2016 or early 2017, and this will be the truest available measure of scheme solvency. It is highly probable that they will want explanations from those Funds that slip considerably down the league table when the valuations are rebased on a like-for-like basis (like the Fund shown in slides 16 and 17 of Hymans Robertsons' presentation) , and it is highly unlikely that the Leicestershire Fund will be one of these Funds.
25. Manipulation of actuarial assumptions can give a favourable outcome in terms of employers' contribution rates. This simply buys the employers some time. If the assumptions are not borne out in the future this will build up considerable cost pressures for employers in the future. This is not considered a sensible approach to an issue that is long-term in nature and from which the most likely 'escape' is higher employers' contribution rates for many years to come.

Agreement of key actuarial assumptions

26. In his presentation that preceded this report, the actuary provided background information and explained the rationale for his recommendations for the three key actuarial assumptions. This can be broadly summarised as follows:

Discount rate/future investment return

- The starting point is what is known – the guaranteed long-term return on UK government bonds (effectively the 'risk free' return available to the Fund)
- The Fund, however, holds very few of its assets in UK government bonds, so an allowance is made for the expected long-term future investment return *over-and-above the risk free return* on each asset class held by the Fund
- The blended expected long-term future investment return of the Fund, taking into account the Fund's actual investment strategy, is 1.8% p.a. above UK government bond yields

Salary growth assumptions

- Historic salary growth for members that have stayed in the fund from one actuarial valuation to the next has been RPI + 1 p.a.%
- The government have stated that public sector pay growth will be no more than 1% p.a. over the next 4 years (assumed to be until 31st March 2020)
- In the absence of any other information, it is then assumed that pay growth will revert to the historic norm
- As the final salary element of the LGPS will gradually lose its importance over the years (because service after 31st March 2014 is now based on earnings in individual financial years and not on final salary), the amalgamation of the impact of the short-term pay restraint and reversion to the historic norm gives a blended future pay growth assumption of RPI

- The market's assumption of RPI is derived from the difference between yields on index-linked and conventional government bonds at the actuarial valuation date

Pension increase assumptions

- Increases in pensions in payment, increases in the value of deferred benefits that have yet to come into payment and increases in the value of career average-based future pensions are all linked to the Consumer Price Inflation
- It is possible to derive the market's view on future *Retail* Price Inflation from the difference between yields on conventional and index-linked government bonds
- Because of the difference in the methodologies between the calculation of the two inflation measures (including, but not limited to, what is included in the measures and their weightings), it is necessary to make an adjustment to produce a future Consumer Price Inflation figure
- Based on the history of the two measures (CPI has been calculated since 1996), the expectation is that in the future CPI will be 1% p.a. lower than RPI
- The assumption for pension increases will be RPI (derived by taking the difference between yields on conventional and index-linked government bonds) less 1% p.a.

27. The other assumptions that are included in the actuarial valuation will continue to be set by agreement between the actuary and Leicestershire County Council's Director of Finance. These assumptions, in combination, will have an impact onto the outcome of the valuation but their influence is considerably less important than the three key assumptions set out above. Some of these assumptions are likely to be set after the actuarial data has been processed – for example, assumptions on the number of early leavers from the Fund are best set following an assessment of recent experience. Unless there are particularly strong grounds for using alternative assumptions, it is probable that the advice of the actuary will be accepted.

Timeline

28. Although the actuarial valuation is based on the Fund's position as at 31st March 2016, the reality is that validation of the data (on over 87,000 records) is time consuming and is partially reliant on information from employing bodies. It is unlikely that the valuation at a whole Fund level will be available much before the end of October 2016.
29. The whole Fund valuation is, in itself, of limited use. The key outcome is the valuation on an individual employer sub-fund level as this is what is taken into account when setting contribution rate strategy and employer contribution rates. Individual sub-fund valuations on all of the 250-or-so employers are likely to be available until late November. As the contribution rates are a key element of employers' revenue budgets, an employer forum will be held as soon as is possible to present the outcome of the valuation to employing bodies. In previous valuations this employer forum has happened at the end of November or beginning of December, and a similar date is expected this time.
30. Before the actuary can certify the employers' contribution rates, he must have due regard to the Funding Strategy Statement (FSS) of the Fund. It is necessary to consult employers on the contents of the FSS, and also for its contents to be approved by this committee. It is probable that a draft FSS will be brought to the

January 2017 meeting of the Local Pension Committee and although it is hoped that the consultation with employers will have taken place by this time, the timescales are very tight and there is a chance that the consultation may need to take place after the LPC has agreed a draft FSS.

31. As far as is possible the Fund will engage with employing bodies in order to make the valuation process as smooth as possible. The ultimate aim is to try to ensure that there are no surprises for employers when they receive their contribution rates. Even though some employers will no doubt have rates certified that are higher than they would have wished for, it is important that the Fund has given them the opportunity to understand why the rates are necessary and to understand that they are being treated fairly. The Fund has historically enjoyed a good relationship with employers and there is no reason to suggest that this will change, despite the probability of higher employer contribution rates.

Summary

32. The 2016 actuarial valuation of the Fund is likely to be tough, and there is a very high likelihood of increases in contribution rates for the vast majority of employing bodies. The actuarial assumptions used impact directly onto the outcome of the valuation, both in terms of the funding level (i.e. the ratio of assets to liabilities) and the theoretical employers' contribution rates that are set.
33. Employers ultimately need to pay contributions into the Fund to ensure that all of the benefits for which they are responsible are met. The actuarial valuation sets the pace at which these employer contributions are paid, but the actual amount of benefits paid is dependent on a multitude of factors. What employers do not pay now will have to be paid in the future, but will be a higher amount due to the investment returns that have not been earned in the meantime. Using actuarial assumptions that are stretched to the extent that there is little-or-no-prudence in them is not a sensible policy.
34. Using modelling techniques to ensure that employer contribution rates ultimately have a high probability of being sufficient to meet the full cost of benefits is a better option than what would amount to a (probably vain) hope that everything will turn out alright in the end. These modelling techniques will not stop the need for contribution rate increases but they will at least provide a robust and risk-assessed basis of evidence that the actuary is setting contribution rates that are sensible, albeit that these rates will in many instances be below the theoretically required rate calculated within the valuation.
35. Agreement by the Committee of the basis on which the three key actuarial assumptions will be set *before* the actuarial valuation date will show a willingness to deal with the financial position of the Pension Fund in an open manner, and in a way that considers the best long-term financial interest of both employers and the Fund. Given the increased scrutiny that the LGPS is under from both the Scheme Advisory Board and The Pensions Regulator, this level of openness will no doubt be appreciated.

Recommendation

36. The Committee is recommended to approve that the actuarial assumptions to be used in the 2016 actuarial valuation of the Fund for discount rate, salary growth and pension increase are as set out in paragraph 26 of the report.

Equal Opportunities Implications

None specific

Background Papers

None

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