

This edition of Pension Snippets looks at mortality with some analysis, consequences and emerging challenges.

Mortality Risk

www.richardsconsulting.co.uk_papers

May I refer you to fellow independent consulting actuary Stephen Richards' 11th July lecture on restructuring and pricing of longevity risk. Whilst not specifically aimed at those involved in pension scheme funding, I would suggest it would be very dangerous for Trustees and Scheme Actuaries to ignore the underlying themes. One aspect that affects most pension schemes, is "concentration" – (*) the proportion of the scheme membership that makes up 50% of the scheme liabilities. (Alternatively, you could identify individual member liabilities over £X,000)

The concentration examples cited in Stephen's lecture are reproduced below - in the first three columns. For example the small scheme #1 has 5 pensioners representing over 50% of liabilities.

Sch	Membership	Concentration (*)	Safety Margin 95%	Safety Margin 99%
1	40	11%	25.6%	37.2%
2	800	12%	4.8%	6.7%
3	5,300	6%	2.1%	3.0%

The challenge that naturally follows is; What proportion of your scheme's liabilities is accounted for by the small group probably comprising former executives and senior long serving staff. Shouldn't you know this as part of Trustee Knowledge & Understanding (TKU) and Internal Controls? I would then suggest that

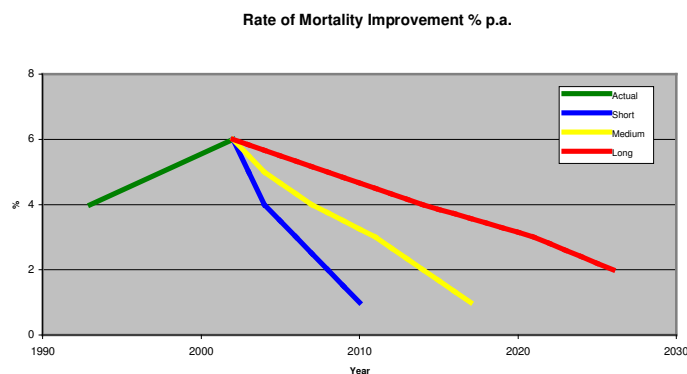
knowing that a small number of individuals effectively dictate half your liabilities demands the (risk) assessment of the emerging natural statistical variations. This can be assessed by asking – "How much extra money or what safety margin is necessary to be 95% or 99% certain that the fund will be sufficient to pay all pensions. (Trustees might in future be challenged as to how "prudent" they were in their technical provisions if they ignore such inevitable statistical fluctuations)! Unsurprisingly the safety margin depends on the number of members and the concentration – see columns 4 and 5 above. Is it time to reconsider that decision not to buy out pensions in payment?

Schemes like #3 with over 5,000 lives, (or small life offices and aspiring new players in the annuity buy out market!), can be relaxed that only a relatively small margin (extra contribution or capital call) is required to be pretty sure that everybody gets their pension. In contrast small schemes, like #1, face the distinct possibility that natural statistical variation may leave them asking for further funds (well beyond the time scale of their current employer covenant assessment horizon!) The relative size of scheme and sponsor is obviously important.

Cohorts

http://www.sias.org.uk/siaspapers/search/view_paper?id=LongevityRisk

Roman scholars will instantly identify a cohort as one tenth of a roman legion. For pension schemes however the word is also used to describe the future reduction or pattern of mortality improvement. There are "short", "medium" or "long" cohort projections. Your PPF levy calculation is for example based on the medium cohort. "Long" implies continuing high improvement rates and hence greater longevity and therefore it produces higher pension costs. The above paper illustrates the cohort "mountain" (front cover) and the short, medium and long cohorts in "contour" format on page 56. The most dramatic projections are for those born in 1926 – illustrated above. How prudent are your projections or, continuing the mapping analogies, how steep is the "precipice"?



And finally; Just in case you thought that improving mortality doesn't apply to your pension scheme, may I refer you to the graph of increasing life expectancy on page 31 of the above. Life expectancy is improving across all social groups and social grouping is hugely influential in so called geographical or post code mortality assessment. In future best advice may therefore be to take up low skilled manual work when you purchase your annuity in ten equal tranches!

As always, for further comment, assistance, advisory or trustee services, contact me on **07714 064964** or via allan@acmca.co.uk Feedback on Pension Snippets is always welcome. For further details, the full CV, occasional lecture notes and published articles and previous Snippets - visit the web site at www.acmca.co.uk