

Information overload: Setting mortality assumptions in the modern era

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What we promised to talk about



Who we are



Jonathan Hughes, Munich Re





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Our agenda



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What we are going to conclude





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A brief history of base assumptions





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A brief history of base assumptions





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A brief history of base assumptions



£10,000 pension Smoker Heart attack No financial dependants

- Individual underwriting
- Current hot topic
- Role for Trustees?
- Insurability?



What next?



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A brief history of trend assumptions





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Source: Own summary of mortality improvements from CMI library of mortality projections



A brief history of trend assumptions

A brief history of trend assumptions



What next?



Base mortality assumptions have become more precise over time

- · Can do the same with trend assumptions?
- · Should we?



Making trend assumptions more precise Tapering assumptions



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Making trend assumptions more precise **Tapering assumptions**



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Making trend assumptions more precise **Amounts-based analysis**



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Making trend assumptions more precise Cause of death insights





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Making trend assumptions more precise Cause of death insights





Making trend assumptions more precise Structural models of mortality drivers



Making trend assumptions more precise Individualised assumptions



Making trend assumptions more precise Is it worth bothering?

| Probably not | but |
|--|--|
| Trend losses only emerge slowly, so it is not an urgent problem | Step changes do occur e.g. interim adjustments, CMI model Limited opportunity to catch up later if the employer covenant is particularly weak |
| Trend risk is "two-sided", so you are as likely to gain as lose | Actuaries (and many others) have generally erred in one direction |
| Large amounts of subjectivity are needed, whatever approach is taken | Segmenting trend risk highlights scheme- specific issues When de-risking, the longevity buyer may have considered something you have not |

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What we have talked about



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What we conclude

| New data can help | There are many relatively recent datasets available to help answer some longstanding questions about pension scheme mortality |
|---------------------|---|
| Markets change risk | Longevity risk itself tends to change slowly, but market dynamics can quickly change the risk held by particular parties |
| Context matters | The optimal level of sophistication for mortality assumptions depends crucially on a particular scheme's circumstances and strategy |





Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenters.

