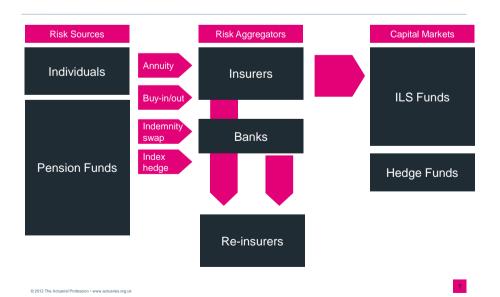


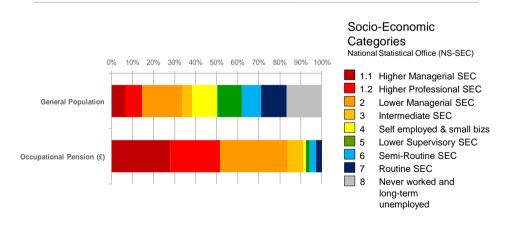
Longevity Risk Transfer Journey – Part I



Risk perspectives – opening up the market



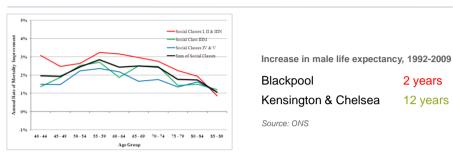
National population vs pension schemes



National population is poor match for scheme SEC profiles

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Different subpopulations, different trends



Source: CMI Working Paper 39; © 2009 Institute and Faculty of Actuaries

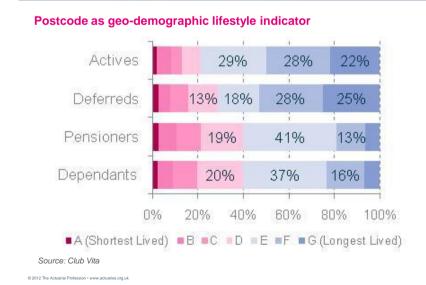
Top SECs have seen 50% bigger increase in lifespan than bottom SECs 6x difference in increase in life expectancies between area

2 years

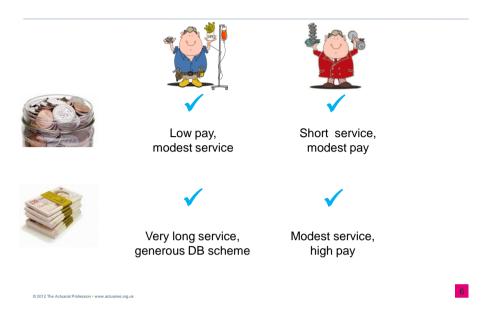
12 years

Why expect a common trend in subpopulations in future?... ...so no surprise that schemes dismiss population indices!

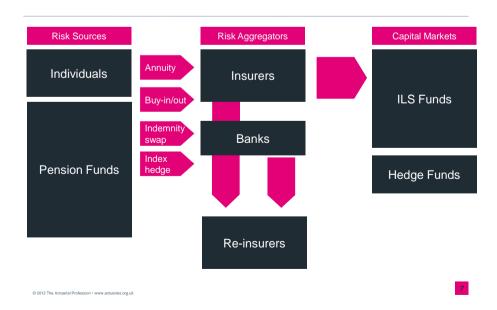
Experience data - tells you everything?



Is pension amount a good rating factor?



Longevity Risk Transfer Journey - Part II



Longevity Risk Transfer Journey – Part II

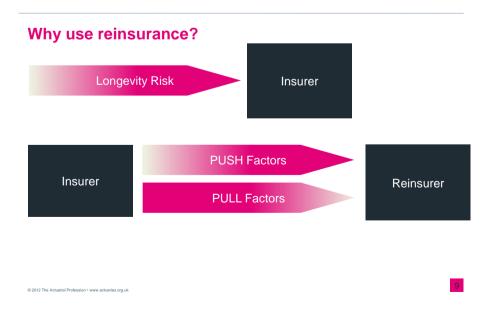
Overview

- Why reinsure this risk?
- Reinsurance landscape
- Small schemes
- Deferred members
- Risks transferred
- Quotation process
- Non-price issues
- · Key takeaways.





Longevity Risk Transfer Journey – Part II



Longevity Risk Transfer Journey - Part II

PUSH PULL Odd risk Mortality heavy firms Monitoring Offset ? Improvements persist regulator Capital Competition Model risk Future Capacity Optimisation Indemnity solutions Assets Real market prices Certainty Standardisation of terms Evolution of pricing Strong counterparties All sizes All risks **PUSH Factors PULL Factors**

Longevity Risk Transfer Journey - Part II

Reinsurance Landscape Hannover RGA Re · More players Capacity Retention Pacific Life Munich Re Re · Stand alone pricing Preferences Non-price issues Prudential SCOR US

Longevity Risk Transfer Journey – Part II

Small Schemes

- Bread and butter
- Pricing capability
- Packages
- Rating factor models
 - Survival
 - GLMs
- · One reinsurance partner



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Longevity Risk Transfer Journey – Part II

Deferred members

- Cash flow uncertainty
 - Early / late retirement
 - Commutation
- · Pre-defined slice
 - over age x
 - retirees over next n years
- Package with pensioners



Longevity Risk Transfer Journey - Part II

Risks transferred

- Mortality of member or dependant in-payment
- Contingent spouse mortality
- Improvements in mortality
- Proportion married
- Age difference



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Longevity Risk Transfer Journey – Part II

Quotation process

- What does a longevity price look like?
- · Apples vs Apples
- Benefit simplification
- Spouse's definition
- Limited term
- Retention
- Non-price issues



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Longevity Risk Transfer Journey - Part II

Non-price issues

- · Key part of quotation
- Counterparty choice
- At one extreme can invalidate your cover
- Counterparty risk
- Termination
- Collateral
- Data





Longevity Risk Transfer Journey – Part II

Key messages

- Evolving more established market
- Small schemes
- Deferred members
- Benefit simplification
- Non-price issues
- Capital markets



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Questions or comments?

Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.

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