



Institute and Faculty of Actuaries

Longevity Risk Transfer

Douglas Anderson



03 February 2016

Agenda

1. Drivers of change in market
2. Actuaries' central expectations
3. Articulating the uncertainty
4. DC decumulation for individuals
5. A look to the future



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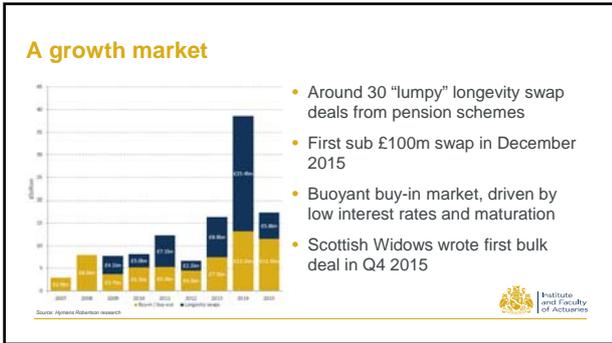
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Longevity risk transfer

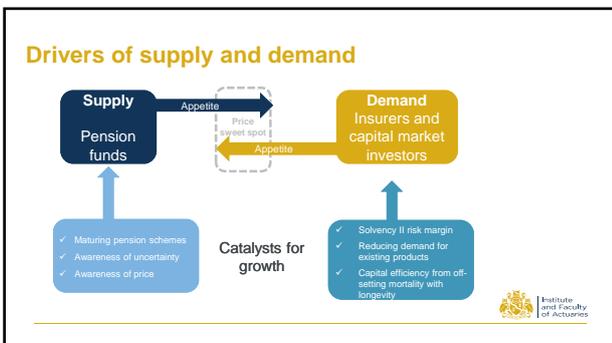
1. Drivers of change

Sponsorship
 Thought leadership
 Community
 Professional Meetings
 Education
 Working parties
 Volunteering
 Research
 Shaping the future
 Networking
 Professional support
 Enterprise and risk
 Learned society
 Opportunity
 International profile
 Journals
 Support

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- Around 30 "lumpy" longevity swap deals from pension schemes
- First sub £100m swap in December 2015
- Buoyant buy-in market, driven by low interest rates and maturation
- Scottish Widows wrote first bulk deal in Q4 2015



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Longevity risk transfer

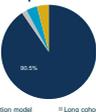
2. Actuaries' central expectations

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The pensions 'herd'

Approach to longevity improvements



Category	Percentage
CMI projection model	90.5%
Long cohort	9.5%
Other / None / Not stated	0.5%
Medium cohort	0.5%

Nearly all schemes rely on the CMI model

Long term rate



Category	Percentage
Greater than 1.5%	61.5%
Greater than 1%, less than 1.5%	13.3%
1% or less	2.0%
Not stated	9.4%
Not stated	1.5%

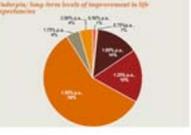
Over 60% of schemes use the same long term rate

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Pension schemes & life insurers' long term views

Pension schemes

Challenges: Set long term basis of improvement in life expectancies

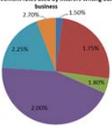


Source: PWC 2015 Pension Schemes Funding Survey

- Assumptions set by trustees on advice of actuaries
- Assumptions required to be set using prudent principles

'Typical' insurer

Long term improvement rates used by insurers writing bulk annuity business



Source: Morningstar Robentson analysis of 2014 year end PRA returns

- Assumptions set by actuaries
- Assumptions required to be prudent

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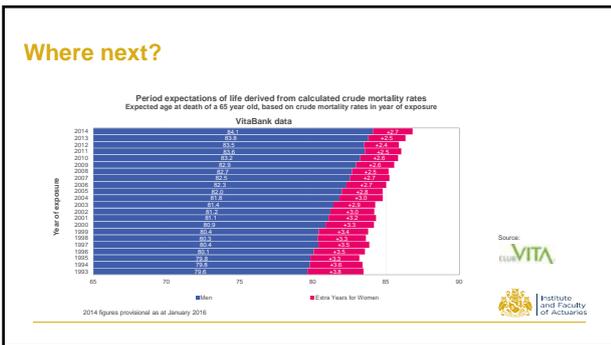
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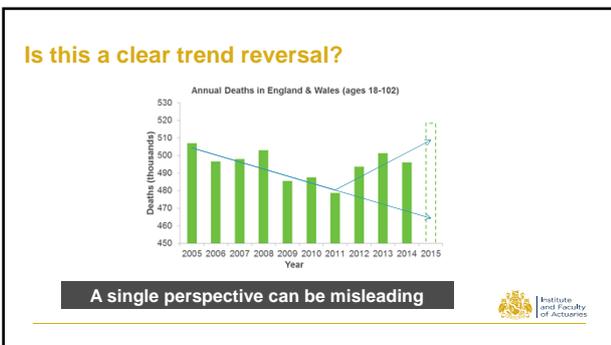
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3. Articulating the uncertainty

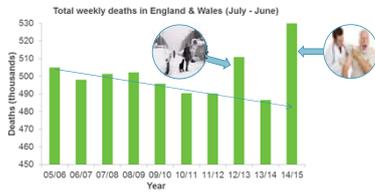
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Advice
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 Surgery





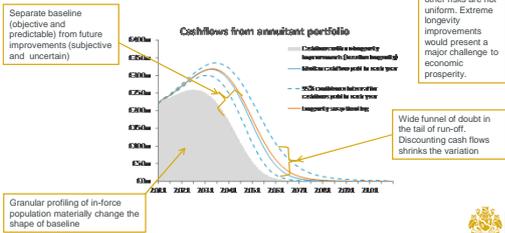
Or just increased volatility in the data?



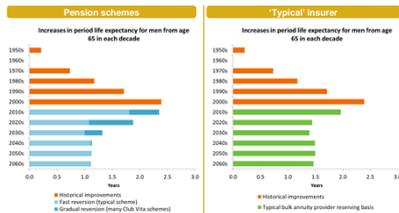
Looking at the data from another angle



Range of future outcomes

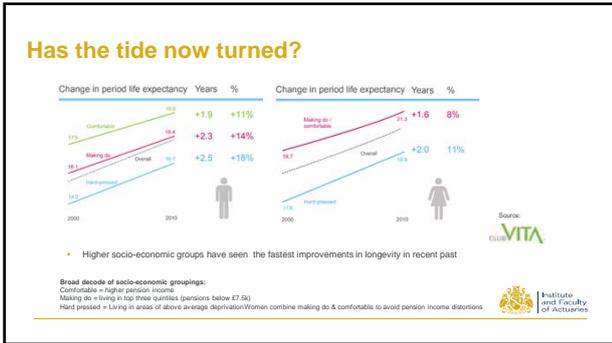


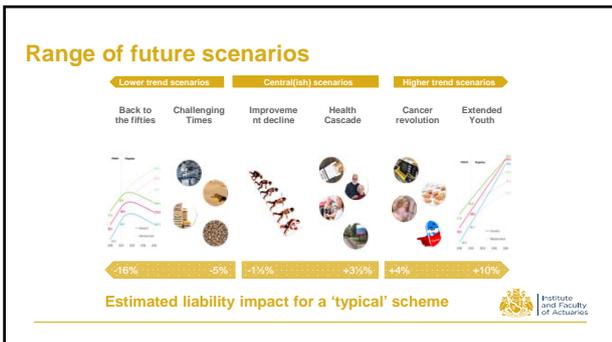
High conviction in rapid deceleration



Typical scheme assumption weaker than insurance reserving. Gradual reversion different shape to insurers







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4. DC Decumulation

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 Sponsorship
 Thought leadership
 Press
 Community
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 Opportunity
 International profile
 Journals
 Support

What age do you think you will live to?

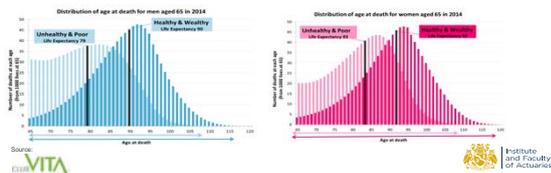


Significant under appreciation of great news



Another flaw of averages

- Premature deaths have reduced, but still a wide range
- Life expectancy figures hide the idiosyncratic risk
- Different shapes in different socio-economic groups (links to postcode areas)

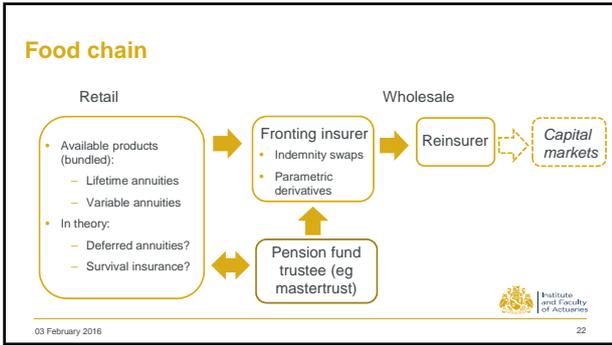




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5. A look to the future

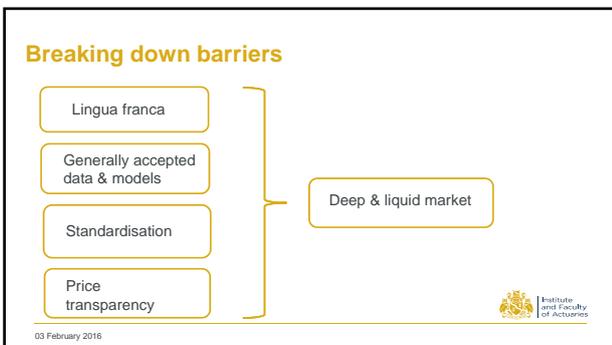
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Surgeon



A future for flexible derivatives?

	Indemnity swaps	Parametric
Non-pensioners	✘	✔
Extreme risk protection	Yes, but all or nothing	Yes, flexible
Duration	50+ years	Series of 10 year contracts
Hedge effectiveness	100%, but only for pensioners	c.80%, but deferreds too
Transaction costs	High	Low
Contract	Insurance or derivatives	Derivative
Transparent market price	✘	✔

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Questions **Comments**

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 presenter.



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