

The Actuarial Profession  
making financial sense of the future

Pensions Conference 2010  
Andrew Gaches, Club Vita  
Douglas Anderson, Hymans Robertson



**The risky side of life**  
Managing longevity risk

11 June 2010

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Longevity is a big issue...

**£30,000,000,000**

**5 days earnings**

**20% increase in liabilities**

**7 years variation**

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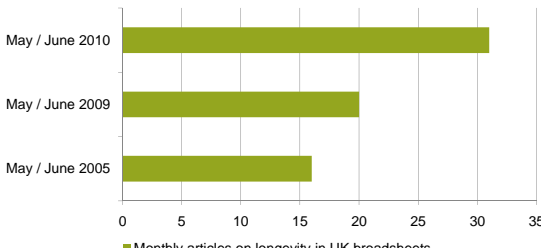
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...and the world seems to agree



Period	Monthly articles on longevity in UK broadsheets
May / June 2010	31
May / June 2009	20
May / June 2005	16

■ Monthly articles on longevity in UK broadsheets

Source: Hill & Knowlton

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## Longevity risk is different

### Volatility risks

- Short term fluctuation risks
- Equity price moves
- Bond price moves
- Currency moves

### Cash flow risks

- Affect actual amounts of benefits payable
- Higher inflation
- Increased longevity

### Higher inflation

- Real assets likely to grow faster too
- Aligned risk strategy with Government policy

### Increased longevity

- (Almost) independent of asset side
- Government social/health policy acts against pension schemes

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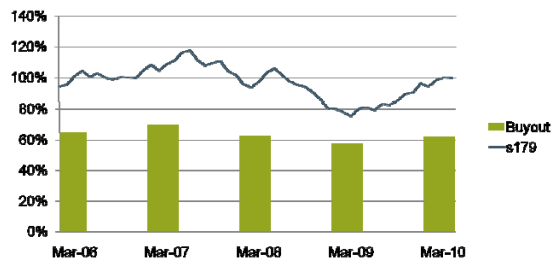
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## Buyout is unaffordable (for most)



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Source: Pensions Regulator / own calculations




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## Longevity swaps: The highs



### Babcock pension to hedge risk of longevity

First scheme to offset costs of long life expectancy. More company plans prepare to follow suit. By Martin Jones and Emily Smith.



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## Longevity swaps: The lows



THE INDEPENDENT

Premier ditches pension swap plans and takes on risk of long-lived members

Co-operative is second firm to ditch longevity swap deal

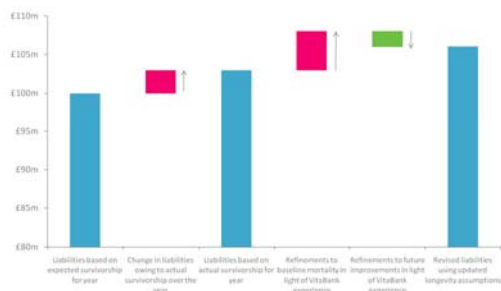
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## Who's left holding the baby?



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## Monitoring longevity trends



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## Risk sharing benefit designs

### Adjust member contributions

- Monitor longevity experience
- Adjust member contributions to reflect any change in costs
- Crude across generations and unstable in closed schemes
- But several examples in UK public service schemes

### Longevity adjustment factors

- Apply on retirement
- Future service only (without member consent)
- Agree benchmark and monitor subsequent experience
- Personal choice of later retirement or smaller pension
- More targeted, but criticised for difficulties in planning

### Sharing savings from late retirement

- For schemes that do not fully compensate late retirees
- Many examples in public sector and in schemes with split retirement ages following Barber
- Encourage later retirements, by introducing uplifts to past service
- Can split the money between employee and employer, to create win-win

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## Innovative funding plans

### Employer fear of trapped surplus

- Strip out contributions for longevity improvement
- Direct longevity contributions into Escrow account

### Scepticism about allowance for future improvements

- Agree triggers for extra employer contributions
- Monitor actual experience

### Employer hoping to save costs from later retirements

- Assume later retirements in technical provisions
- Monitor actual experience
- Agree triggers for extra contributions if retirement behaviours do not change

### Underfunded scheme with concentrated longevity risk

- Selective annuity buy-in exercise for those with largest pensions
- Ensure that residual assets have sufficient potential to recover deficit

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## Communicating longevity clearly



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## 1. Know your limitations

Separate the known knowns...

...from the known unknowns...

...in assumptions **and in results**

Longevity allowance	Technical Provisions
Recent experience assuming no changes in the future	£100M
Provisions for future increases in life expectancy	£112M

The above is illustrative based upon what the authors understood to be a reasonably typical valuation basis. It does not represent the personal views of the authors, or their employers, as to what a reasonable allowance for future improvements is, nor does it constitute a recommendation.

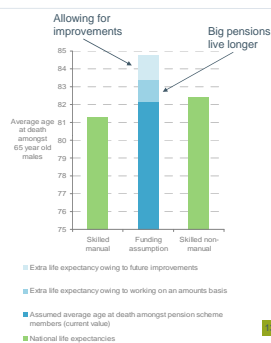
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## 2. A common language

Use **life expectancies** or **survival probabilities** to convey assumptions...

...and **reconcile** these with numbers clients will see in the media



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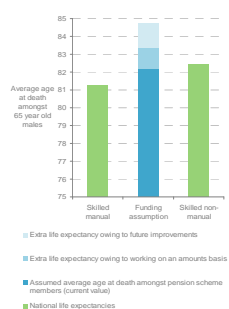
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## 3. Keep it real

Use **scenarios** to help clients understand how a particular projection might arise....

Consistent with:

- ▶ Cohort effect in short term
- ▶ Short term reductions in heart disease and cancers in line with government targets
- ▶ Gradual reduction in numbers dying from cancer and heart disease by 90% amongst under 75s and 70% amongst over 75s by 2205 (with deaths from other diseases reduced by 70% and 50% respectively)



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#### 4. Don't be blinkered

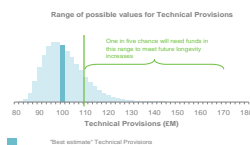
Do not be afraid of the unknown...

...instead **show a range of possibilities**

...and **monitor emerging experience**

Mortality allowance	Technical Provisions
Medical advances <b>faster</b> than government targets	£110M
Best estimate	£100M
Medical advances <b>slower</b> than government targets	£95M

The above is illustrative. It does not represent the personal views of the authors, or their employers, or to what a reasonable spread for future experience is, nor does it constitute a recommendation.



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#### Effective communication

1. Know your limitations
  - Separate the knowns from the unknowns
2. A common language
  - Consistent and accessible communication
3. Keep it real
  - Relate the assumptions back to the real world
4. Don't be blinkered
  - Show the uncertainty and monitor experience

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#### Questions or comments?



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