Annuity risk transfer market
A fad or here to stay?

10 December 2010

Agenda

• UK Annuity Market
• Market Participants and Transaction Activity
• Demand vs Supply
• Business Case Process
UK Annuity Market
Overview

DB Pension Schemes

- UK Defined Benefit Pension assets almost £1,500bn
- More than 69% closed to new members
- Increasingly closed to future accrual
- Closure can increase funding cost
- So far less than 3% of risk passed to insurance market...
- ...but growing fast
UK Annuity Market Opportunity

Personal Pensions & Annuities

- Product for those unable to join DB schemes
- In excess of £600bn assets of which...
- ...£140bn in annuity reserves within insurers
- Rapid growth due to closure of DB and demographic changes
- Until now, compulsory to annuitise by 75
- UK market accounts for estimated 40% of global annuity market

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Individual Annuity Market

Insured annuity sales (£bn)

Source: ABI, TowersWatson

Individual Annuity Market

2008 Market Shares

Standard Health Annuities

Underwritten Annuities

Source: ABI, TowersWatson

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**Buyout, Buy-in, Swap**

**Swap**

- **Regular Premiums** (Expected annuities + margin) → **Insurance Company**
- **Only longevity risk transferred**

**Buyout/Buy-in**

- **Regular Premiums** → **Insurance Company**
- **Longevity and asset risk transferred**

Buyout: removes all risk including operational risk from scheme and individual pensioner has contract with insurer.

Buy-in: insurance asset bought by scheme, scheme retains operational and counterparty credit risk. Scheme retains obligation to pay pensioners.

**Pension Scheme Primary Market Buyout, Buy-in and Swap Volumes**

Pension buyout dominated by Prudential & L&G until 2006.

New entrants, increasing awareness from pension schemes and attractive pricing fuelled growth thereafter.

2009 saw first longevity swaps totalling £4.1bn which held volumes up, which had dropped due to financial crisis.

Sources: Guy Carpenter, Lane Clark & Peacock, Hymans Robertson
### Pension Scheme Primary Market

#### 2009 Pension buyout, buy-in Market Shares

<table>
<thead>
<tr>
<th>Insurer</th>
<th>Number of deals</th>
<th>Value of deals (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aegon</td>
<td>12</td>
<td>155</td>
</tr>
<tr>
<td>Alico</td>
<td>7</td>
<td>40</td>
</tr>
<tr>
<td>Aviva</td>
<td>47</td>
<td>176</td>
</tr>
<tr>
<td>L&amp;G</td>
<td>82</td>
<td>828</td>
</tr>
<tr>
<td>Lucida</td>
<td>1</td>
<td>500</td>
</tr>
<tr>
<td>MetLife</td>
<td>8</td>
<td>489</td>
</tr>
<tr>
<td>Prudential</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PIC</td>
<td>10</td>
<td>1,113</td>
</tr>
<tr>
<td>Rothesay Life</td>
<td>1</td>
<td>370</td>
</tr>
<tr>
<td>Total</td>
<td>168</td>
<td>3,671</td>
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</table>

Source: Hymans Robertson

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### Pension Scheme Primary Market

#### Longevity Swaps Transactions

<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Credit Suisse</td>
<td>3</td>
<td>1.2</td>
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<tr>
<td>Rothesay Life</td>
<td>2</td>
<td>1.9</td>
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<tr>
<td>Swiss Re</td>
<td>1</td>
<td>1.0</td>
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<tr>
<td>Total</td>
<td>6</td>
<td>4.1</td>
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</table>

Source: Hymans Robertson

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**2010 Longevity Swaps**

- £3bn BMW deal with Abbey Life (part of Deutches Bank)
- £1.3bn BA deal with Rothesay Life

Source: Press releases
### Reinsurance Market Transactions to 2007

<table>
<thead>
<tr>
<th>2000-2006</th>
<th>Reinsurer</th>
<th>Structures</th>
<th>Amount £bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prudential</td>
<td>Asset</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>XL Re</td>
<td>Asset &amp; Swap</td>
<td></td>
<td>4.0</td>
</tr>
<tr>
<td>Canada Life Re</td>
<td>Asset</td>
<td></td>
<td>2.2</td>
</tr>
<tr>
<td>Munich Re</td>
<td>Swap</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>Partner Re</td>
<td>Swap</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>Pacific Life Re</td>
<td>Asset</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>12.2</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2007</th>
<th>Reinsurer</th>
<th>Structures</th>
<th>Amount £bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada Life Re</td>
<td>Asset</td>
<td></td>
<td>11.3</td>
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<tr>
<td>Swiss Re</td>
<td>Asset</td>
<td></td>
<td>7.2</td>
</tr>
<tr>
<td>Prudential</td>
<td>Asset</td>
<td></td>
<td>1.8</td>
</tr>
<tr>
<td>Hannover Re</td>
<td>Swap</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>Max Re</td>
<td>Asset</td>
<td></td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>21.6</strong></td>
</tr>
</tbody>
</table>

Source: SCOR estimates

- All deals covered portfolios of individual annuities; no pension scheme transactions
- With asset transactions dominated
- 2007 saw explosion with aggressive pricing from some players

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### Reinsurance Market Transactions since 2007

<table>
<thead>
<tr>
<th>2008 - Q3 2010</th>
<th>Reinsurer</th>
<th>Structures</th>
<th>Amount £bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific Life Re</td>
<td>Swap</td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td>RGA</td>
<td>Swap</td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>Swiss Re</td>
<td>Swap</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Hannover Re</td>
<td>Swap</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Partner Re</td>
<td>Swap</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>RBC (retro)</td>
<td>Swap</td>
<td></td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>12.4</strong></td>
</tr>
</tbody>
</table>

Source: SCOR estimates

- 2009 saw first pension scheme transaction
- Larger transactions shared amongst several reinsurers
- Currently, 8 reinsurer/retrocessionaires offering capacity...
- ...although Swiss Re are able to transact as an insurer
Capital Market Participants

- Primarily provide asset risk solutions to insurers and pension schemes
- Also act as intermediaries to reinsurers for longevity risk.
- ...but some banks do retain some longevity risk
- Capital markets structures for longevity risk have had limited success...
- ...so some banks and insurers have formed Life & Longevity Markets Association

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Demand from DB Pension Schemes

Demand fuelled by:

- Recognition of deficit/surplus in accounts causing undesirable volatility
- Increased scrutiny of pension liabilities by analysts, lenders and shareholders
- Potential stumbling block for M&A transaction (e.g. BA/Iberia)
- Funding assumptions stronger; transactions more affordable
- Increasing awareness by sponsors and trustees of longevity risk

Demand for Individual Annuities

Demand fuelled by:

- Increasing numbers with DC pension provision
- Ageing population
- Compulsory annuitisation by 75 until now...
- ...if removed likely requirement for minimum guaranteed retirement income
- Increased awareness that state retirement benefits insufficient
Insurance and Capital Markets Supply

- Increasing number of providers...
- ...but have finite capacity
- Risk residing in pension schemes too great for existing capacity
- Banks retain little risk, need reinsurers or capital market investors
- Large transactions need more than one counterparty
- Over medium to long term demand > supply
- However, pension schemes will not transact at any price

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### Business Case Process

- Market need and reinsurance opportunity
- Barriers to entry?
- Strategic fit
- Market pricing evaluation
- Non-price business terms acceptable?
- Resource and capital requirements
- Business plan
- Approvals process

### Strategic Fit

- Mortality/longevity risk assessment is core competency
- Managing asset risk is not core expertise
- Large mortality portfolio provides partial hedge...
- ...leading to low marginal capital for longevity risk
Business Case Process
Market Pricing Evaluation

• Research to get idea of winning line
• Bottom up technical price – some elements subjective
• Does bottom up come within winning line?
• Yes - then forge ahead
• No then:
  – Opportunistic strategy
  – Stay out completely
• If no need to explain why competitors are able

Business Case Process
Approvals Process

• Local management buy in
• Head office pricing sign off
• Risk management sign off
• Business plan must demonstrate not just a lemming!
• Only then go to Group Executive
• Inevitably long process within larger organisations
• Lessons:
  – Logic doesn’t always win
  – Understand internal politics!
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.