GIRO conference and exhibition 2010
Simon Sheaf and Stephen Kelly

Everything you always wanted to know about the Solvency II balance sheet but were afraid to ask

12-15 October 2010
"We should not underestimate how big of a task it will be to construct this [Solvency II] balance sheet according to the new requirements. It is also worth noting that because of the importance of getting the balance sheet right, you can also expect the FSA to be focusing our attention in this area."

Ken Hogg
Director, Insurance Sector
FSA
18 May 2010
Everything we are going to cover

• Introduction to the Solvency II balance sheet
• Valuation of assets
• Valuation of technical provisions
• Valuation of other liabilities
• Questions and discussion
Introduction to the Solvency II balance sheet
Does it matter?

- "Bedrock of Pillar 1"
- Focus of Supervisory Review Process
- If valuations are inaccurate, MCR and SCR will be wrong
  - using Standard Formula AND Internal Models
- Key element of QIS5
Principles

- Individual item basis
- Going concern basis
- Assets valued on an economic basis
  - in line with IFRS
- Technical provisions valued on market-consistent basis
  - discounted best estimate plus risk margin
- Other liabilities valued on an economic basis
  - in line with IFRS
Valuation of assets
"...assets shall be valued at the amount for which they could be exchanged between knowledgeable willing parties in an arm's length transaction."
Assets

- IFRS cf Solvency II
- Conceptual similarities, though
- IFRS - focus on performance
- Solvency II - protection of policyholders…
Assets

- Solvency II - protection of policyholders...

Source: CEA Working Paper on the Total Balance Sheet Approach
## Assets

Divergence as recorded in balance sheet

<table>
<thead>
<tr>
<th>Asset</th>
<th>Solvency II</th>
<th>IFRS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mark to market</td>
<td>Cost</td>
</tr>
</tbody>
</table>

... volatility

... reconciliation challenges
Valuation of technical provisions
What's different?

- Solvency II segmentation
- Genuine best estimate
- Split between claims provisions and premium provisions
- Legal obligations basis
- Allowance for binary events
- Include expenses - both ALAE and ULAE
- Include allowance for reinsurance non-recoveries
- Cashflows
- Discounting
- Risk margin
What's different?

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- Risk margin

So, quite a lot …
"The value of the technical provisions shall be equal to the sum of a best estimate and a risk margin… The best estimate shall correspond to the probability-weighted average of future cash-flows, taking account of the time value of money…"

- Deterministic methods?
- Stochastic methods?
The new recipe for technical provisions

Technical Provisions

- Claims Provisions
- Premium Provisions
- Risk Margin
Legal obligations basis

• Include contracts when legal obligation is established
  – NOT when policy incepts
• But what does this mean in reality?
• Tacit renewals
• No allowance for quotes even if insurer has no wriggle room
• Recognise profit immediately
• Significant data challenges for many insurers
• QIS5 first dry run of this
  – How are insurers coping?
Binary events - Some examples to depress you

- Aspartame
- Nanotechnology
- Not understanding exposures
- Step change in court rulings
- Exclusions removed
- Retrospective change in conditions
- Mega volcano
- Florida tsunami
- Meteor strike
- EMF
- Global warming
- Nuclear waste
- GM crops
- Nuclear waste
So how do you allow for them?

- Change assumptions underlying projections
- Or add an allowance on top of projections
- Historical experience
- Frequency / severity assumptions
- Very subjective
- Lloyd's has estimated
  - uplift on premium provisions of 2% - 5%
  - uplift on claims provisions of 5% - 10%
- Also need to consider associated cashflows
What about reinsurance?

- Calculate gross provisions and reinsurance recoveries separately
- Principle of correspondence
- Expected recoveries (and reinsurance costs) in respect of existing contracts should be included
- But NOT recoveries in respect of contracts that are not yet in place
- May need to assume future reinsurance purchases
- Allowance for reinsurance non-recoveries
Calculation of risk margin

Calculate SCR in each future year

Discount

Sum

Multiply by the Cost-of-Capital rate (6% is hot favourite)

Risk margin
In many (all?) cases, simplifications will be needed.

- Full calculation of all future SCRs
- Approximate some risks when calculating future SCRs
- Approximate the entire SCR in each future year
- Estimate all future SCRs at once
- Estimate the risk margin directly
Valuation of other liabilities
Article 75

"Liabilities shall be valued at the amount for which they could be transferred, or settled, between knowledgeable willing parties in an arm's length transaction."

- No adjustment to reflect the insurer's own credit standing
Questions and discussion

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