Towards the strengthening and modernisation of insurance and surety regulation

Life insurance technical provisions

XXI International Seminar on Insurance and Surety
Comisión Nacional de Seguros y Fianzas

México D.F.

November 2010

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Regulation and financial reporting is moving away from conservative reserves to a market value approach.

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<th>Solvency I Approach</th>
<th>Solvency II Approach</th>
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<td>Capital Margin</td>
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<td>Conservative</td>
<td>Risk Margin</td>
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<tr>
<td>Technical Reserves</td>
<td>Market Value of</td>
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<td>Liabilities</td>
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<td>Best Estimate</td>
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<td>Reserves</td>
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Regulation and financial reporting is moving away from conservative reserves to a market value approach

- Conservative reserves defer profit recognition  
  - Makes it difficult to assess the true profitability of an insurer
- Reserves below market value create a perverse incentive  
  - Insurers can generate profit by taking on additional risk
- For contracts with embedded financial options, assessment of the market value of liabilities must use option pricing techniques

Solvency II and IFRS are both converging on a “market value of liabilities” approach
The “Holy Grail” is to use the same technical reserves for capital adequacy and financial reporting

"Valuation standards for supervisory purposes should be compatible with international accounting developments, to the extent possible, so as to limit the administrative burdens on insurance or reinsurance undertakings" (para 46)

Solvency II Framework Directive
However, the “Holy Grail” is unlikely to be found

- IASB has come out against profit at point of sale
  - Profit will be reserved as a residual margin, released over the contract life
- In Europe, regulators are reluctant to put complete trust in the capital models
  - They have more control over technical reserves
  - Areas of debate are likely to be settled by inserting conservatism
  - Although less than before
IASB Phase II Insurance Contracts: “provide relevant information to users for economic decision-making”

Building block approach

- Premium
  - Residual margin
  - Risk adjustment
  - Best estimate liability
  - Some acquisition costs

Consistent with current observable market prices
Solvency II Technical provisions

An Economic Approach

- Start with discounted value of the best estimate cashflows
- Add risk margin:
  - Hedgeable risks: use market-consistent techniques
  - Non-hedgeable risks: use cost of capital approach to derive market value margin
- No arbitrary floors:
  - Surrender value
  - Unearned premiums limitations
There are still difficult technical issues to resolve

- Selecting a reference rate (“risk-free” rate)
- How to value financial instruments in illiquid markets?
  - Liquidity premium adjustments?
- Calibrating stochastic models
  - Long term option prices and yields
- Allowance for Non-Hedgeable Risk
- Allowance for own credit risk?
Candidates for the reference rate (pre-liquidity premium)

UK GBP: Zero Coupon Yields

- Gilts
- Swaps
- AA

Dec 2006
Dec 2007
Dec 2008
Dec 2009

Source: Towers Watson analysis of Bloomberg data
Reference rate: key issues

- Swaps versus government bonds versus high quality corporate yield
  - Solvency II and MCEV trend towards swaps
  - Credit risk issues with some government bonds
  - Accounting mismatch issues with corporate debt
- How to calibrate the corporate bond liquidity premium?
  - Residual spread approach
  - Solvency II QIS 5: “50% * (corp. bond yield – swap yield – 40bp)”
    - Independent of assets actually owned
Level of liquidity risk premium in illiquid assets

Eurozone and USD illustrative residual spreads (average up to 10 years) and draft QIS5 liquidity premium relative to swaps

Sources: Towers Watson analysis of Bloomberg and Markit data; April 2010 draft QIS5 technical specification including CFO Forum/CRO Forum paper on risk-free rates
towerswatson.com

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Liquidity premium in the valuation: key issues

- Liability-only restrictions
  - “LP should be independent of the investment strategy adopted by company” (Task force report LP principle 2)
  - Efficient market hypothesis in an illiquid and inefficient market?

- Liability, assets and ALM strategy restrictions
  - What viable investment strategies are available to insurer?
  - “LP …should not exceed extra return which can be earned by insurer holding illiquid assets free of credit risk, available in the financial markets and matching the cash flows of the liability” (Task force report LP principle 3, CFO/CRO Forum paper)
### Adjustments to option market prices

#### “Good” reasons
- Disorderly or non-existent option markets
- Fair value principles
- Liquidity premium only for non-option portfolio

#### Other reasons
- Remove credit risk within market prices
- ESG cannot handle high prices
- Prices much higher than last year
- Historic volatilities “better”
## Allowance for Non-Hedgeable Risk: Risk Margin

<table>
<thead>
<tr>
<th></th>
<th>Solvency II</th>
<th>IASB Phase II</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To ensure that the value of the technical provisions is equivalent to the amount insurers would be expected to require in order to take over and meet their obligations.</td>
<td>The maximum amount the insurer would rationally pay to be relieved of the risk that the ultimate fulfilment cash flows exceed those expected.</td>
</tr>
<tr>
<td><strong>Measurement technique</strong></td>
<td>Cost of capital</td>
<td>Cost of capital, or Confidence level, or Conditional tail expectation (Confidence level has to be disclosed).</td>
</tr>
<tr>
<td></td>
<td>QIS 5: 6% p.a.</td>
<td>Not prescribed</td>
</tr>
<tr>
<td></td>
<td>CEIOPS: At least 6% p.a.</td>
<td></td>
</tr>
<tr>
<td><strong>Diversification allowed between portfolios</strong></td>
<td>QIS 5: Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>CEIOPS: Potentially not</td>
<td></td>
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Allowance for own credit risk

“value assets and liabilities as follows:
(a) assets…. 
(b) 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
When valuing liabilities under point (b), no adjustment to take account of the own credit standing of the insurance or reinsurance undertaking shall be made.”

Source: Framework Directive Article 75 Valuation of assets and liabilities (extract)

- QIS 5 specification: “subsequent”
Conclusion

- Consensus building around market value of liabilities

However, this has implications:

- Managing the volatility of reported profits
  - Increased focus on asset liability management and hedging
  - Likely changes to product design

- Challenges in communication of results
  - Results will behave differently than before
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