Capital and risk management in a Solvency II world.

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Agenda

1. Looking back to opening balance sheets
2. Risk appetite challenges
3. Balance sheet optimisation
4. Implication for risk
5. Questions
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Looking back to opening balance sheets
What did we learn from 2015 balance sheets?

2015 was focused on “getting over the line” – with IMAP submissions, and MA/VA/transitional applications all demanding focus …. giving very limited opportunities to optimise ahead of Solvency II go-live

Matching adjustment topics
Risk margin
Control processes
IMAP
Negative interest rates
Assumption processes
TMTP recalc
Volatility
Looking back to opening balance sheets
Coverage ratios

Examples of Reported Solvency Ratios

- **Predominantly Life Groups**
  - AXA, 205%
  - Allianz Insurance plc, 209%
  - L&G, 169%
  - Old Mutual, 138%
  - Prudential, 193%
  - Standard Life, 162%
  - JRG, 133%
  - Delta Lloyd, 131%
  - Amlin, 206%
  - SCOR, 231%

- **Predominantly Non Life Groups**
  - Munich Re, 302%
  - Hannover Re, 248%
  - Generali, 178%
  - Bupa, 180%
  - AEGON, 160%
  - Amlin, 206%
  - RSA, 155%
  - esure, 123%

% Solvency Ratio

20 October 2016

Looking back to opening balance sheets
Coverage ratios

However comparing solvency ratios only tells half the story….

- **Standard Life** – “These figures do not take account of £1.2bn of capital in subsidiaries that is not deemed to be freely transferable around the Group”
- **Prudential** – “The Group Shareholder position excludes the contribution to the Group SCR and Own Funds of ring fenced With-Profit Funds and staff pension schemes in surplus”
- **Aviva** – “The estimated Solvency II ratio represents the shareholder view. This ratio excludes the contribution to Group SCR and Group Own Funds of fully ring-fenced with-profits funds and staff pension schemes in surplus”
- **L&G** – “The economic capital surplus was £7.6bn, representing a coverage ratio of 230%.”

Nevertheless solvency ratios will be used….

The diverse products, organisational structures and risk management strategies within the industry mean that direct comparison of coverage ratios can actually be quite misleading.

Nonetheless, analysts and other industry observers are using the coverage ratio to gauge capital strength and sensitivity to market stresses – such as Brexit and interest rate movements.

As a result, announcements have often had a significant impact on share values.
Looking back to opening balance sheets

What do we expect to change?

01 Embedding
02 Productionise
03 Optimise
04 Accelerate

Changes to UK solvency regime in a post Brexit world?

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Risk appetite challenges
Meeting expectations

- Boards’ expectations articulated through risk appetite
- Regulatory expectation articulated through regulatory risk appetite and intervention points
- Market expectations articulated through share price movements, analysts views and rating expectations
- Solvency Ratio

Coverage ratios

- Internal
- Rating agency
- Regulatory

Risk appetite challenges
Board expectations

There are several significant differences between the old and new regimes which are likely to lead to Boards needing to consider revising their Risk Appetite.

Some key differences between the regimes
- Risk Margin
- Modelling over 1 year
- Standard formula
- Changes in assumptions through model approval
- Transitionals
- Matching Adjustment

ORSA
Changes taken account of in ORSA where balance sheet and capital will be stress tested and volatility analysis carried out. ORSA should also identify risks not covered by Pillar 1 which might need to be considered.

Risk Appetite
ORSA is a key tool in assisting the Board in concluding on its risk appetite. Depending on other factors (market expectations, regulatory expectations, rating agency expectations) the Boards’ risk appetite could be the same as your chosen target solvency ratio.
### Risk appetite challenges

#### Market expectations – not all coverage ratios are equal

There are different interpretations across Europe to the rules being taken, and this can lead to disparity.

<table>
<thead>
<tr>
<th>Sam Woods</th>
<th>Executive Director for Insurance, Prudential Regulation Authority</th>
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<tr>
<td>‘We have commented in recent months that considerable caution is required in making comparative judgements on the basis of Solvency II capital positions... This is to be expected with such a far-reaching and complex measure, but in the meantime we would further emphasise that great care is required when attempting to draw comparisons on relative capital levels’.</td>
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<tr>
<td>Examples of differences include:</td>
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<td>• Forward rate</td>
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<td>• Volatility adjuster</td>
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<td>… but likely many more.</td>
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### Aegon Shares Fall After it Lowers Solvency Guidance

Investors sold off Aegon shares over the summer when the company said it expected the rating to be in the 140-170 percent range for the year, worse than analysts had expected.

### Crunch time for insurers on capital rules

Shares in Delta Lloyd have plunged 43% after the Amsterdam-listed insurer said this month that its financial headroom under the new rules would be tighter.

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### Risk appetite challenges

#### Regulatory expectations

It is well known that the regulator had a minimum supervisory intervention point of 120% ICG coverage under Solvency I. Whilst this was generally the minimum some firms may have had higher ratios depending on their individual circumstances.

This approach looks set to continue with the regulator stating that:

“As we did under the ICAS regime, we will of course monitor capital more closely, and expect to discuss contingency plans, as a firm approaches its SCR. In doing so we will take into account the volatility of each firm’s capital position, the nature of its business model and the risks to which it is exposed as set out in its Own Risk and Solvency Assessment (ORSA).”

Further they have stated that:

“Solvency position the Solvency II SCR, as an economic measure, is much more similar to the ICAS regime than to the Insurance Groups Directive (IGD) regime.”

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<td>Managing the risk margin and recalculation of transitional measures will increase emphasis on managing relationship with regulators. Similarly managing the internal model change governance process will increase engagement with the regulator.</td>
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Balance sheet optimisation

What do we mean by capital optimisation?

Different stakeholders can have very different, often entirely contradictory, views on what is meant by capital and optimisation.

Capital optimisation strategies often improve one measure but worsen another….need to consider the value sacrifice to capital benefit trade off.
Balance sheet optimisation
Optimisation so far

Optimisation
To get the most out of something – the selection of a best element (with regard to some criteria) from a set of available alternatives

Has it been optimisation or reduction?

Balance sheet optimisation
Optimisation strategies

Pre & Post TMTP impact on Balance Sheet
## Balance sheet optimisation

### Lessons learned

<table>
<thead>
<tr>
<th>Clear vision</th>
<th>Be very clear at the beginning of the project what a good outcome would be (agree the bases and metrics early on) and make sure all the key stakeholders are aligned to this vision.</th>
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<tbody>
<tr>
<td>Organisation wide engagement</td>
<td>Successful capital optimisation projects do not happen in a silo. Engagement likely needed with teams from actuarial, finance, risk, IT, tax, customer services, compliance, legal……etc.</td>
</tr>
<tr>
<td>Nothing “off the table”</td>
<td>We’ve found successful projects are given freedom to explore all avenues. It’s an entirely new regulatory world and what was agreed in the past doesn’t necessarily always make sense in the future.</td>
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<tr>
<td>Engage key stakeholders early</td>
<td>The success of any project depends on managing key stakeholders …and this is particularly true of a capital optimisation project where the stakes are so high. A late challenge can derail months of work and analysis.</td>
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<td>External perspective</td>
<td>Having an external team independently review proposals and provide constructive feedback can help ensure your project delivers the optimal solution and best value.</td>
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**Implications for risk**

**Risk appetite implications**

Risk appetite statements need to address the potential differences between the regulatory solvency metric and management's internal economic view of capital. This can be done through a twin peaks approach or through less formal approaches.

Need to avoid risk appetite forcing action contrary to a more economic view:

- Transitional measures
- Risk margin
- MA or VA
- Contract boundaries

**Linkage with ORSA:**

The ORSA will reflect management's internal economic view and if the risk appetite statement doesn't include this as an explicit metric, it will be important to demonstrate the linkage between remaining in appetite and achieving strategic objectives.

Has recent ‘optimisation’ created unintended sensitivity or systemic risk? How to deal with increased volatility in calibrating risk appetite?

Recalibration of risk appetite limits and boundaries between zones to take account of revised regulatory capital.

**Implications for risk**

**Interaction with the business**

- Impact of optimisation strategies on business plan
- Wider metrics beyond capital
- Consider value trade-off over time

- Need for timely solvency information
- What to do once fully optimised and under stress?
- Clarity of responsibly for action in stress

- Comprehensiveness of stress and scenario tests
- Increased volatility impact calibrations

- Greater linkage of risk and capital management
- Does optimisation create new risks?
- Impact on risk profile
- Operational risks changed?

- Clarity on available actions
- Prioritisation and severity
- Linkage of actions to different solvency zones
- Discretion versus auto-triggered actions
- Backtesting
Implications for risk
Balancing specificity of management actions

Assessment of solvency against risk appetite needs a structured link to actions. Actions will be of two types:
1. Process
2. Mitigation

Strong linkage of management actions
- Clarity
- Early action
- Regulatory comfort
- Up front governance

Guidelines and indicative management actions
- Discretion
- Recognises complexity
- Avoids pro-cyclicality
- Avoids value destruction

Requires active governance mechanism to act quickly when action is required.

Implications for risk
Asset implications

ALM for matching adjustment
Asset restructure
Search for yield
Investment strategy & asset allocations
Greater use of illiquid assets
Hedging and derivatives
Alternate asset classes
Shareholder asset profile impacted
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