Solvency II
Educational briefing for ratings agencies and market analysts

14 February 2011

NB. These slides have been adapted for the web
Outline

Welcome
Introduction
Whole balance sheet
Technical provisions
Capital resources - Own funds
Solvency Capital Requirement: standard formula
Solvency Capital Requirement: internal models
Fifth quantitative impact study (QIS5)
Pillars 2 and 3
Welcome and purpose

The purpose of the session is educational and factual, using publicly available information.

By the end of the briefing, attendees should have:

• an overall understanding of the Solvency II Directive's objectives and outcomes;
• a sense of the scale of change affecting the insurance sector in the UK, across the EU and globally;
• an awareness of the key issues that affect the insurance sector; and
• an understanding of how Solvency II will affect the attendees' work.

We will not be:

• providing any insights;
• giving any information not in the public domain;
• giving any informational advantage;
• referring to any firms specifically; and/or
• providing any sectoral or industry analysis.

Establish a common level of understanding, dispel myths and clarify misunderstandings
Introduction

Solvency II - UK

- Solvency II
  - Implementation
  - Maximum harmonisation
- UK Enhancements
- Solvency I
  - Minimum harmonisation

Resilience Capital
- ICAS
- Risk Management
- ARROW
- Realistic balance Sheets
What we need Solvency II to deliver

• Good quality capital
• Technical provisions that reflect the reality of the liabilities
• Robust SCR standard formula calibrations that reflect the true economic cost of the risks
• Strong requirements on forward looking risk identification and management
• Strong emphasis on enhanced transparency of firms’ financial positions and risk management approaches
The biggest constraint

2010

European Commission prepare proposals for level 2 implementing measures

2011

EIOPC and European Commission scrutinise level 2 measures

2012

Member states implement measures into national law

2013

EIOPA develops level 3 text

January 2011
Commission publishes Omnibus II proposal

End Q2 2011
Commission publishes level 2 proposal

November 2011
Level 2 implementing measures formally adopted

Q2 2012
EIOPA issues level 3 text

1 November 2012
Solvency II goes live - current

1 January 2013
SII go live - proposed

NB: on current plans as at 9 February 2011
The three pillars

Three-pillar approach

**Pillar 1:** Quantitative requirements
- Balance sheet (including technical provisions)
- Minimum capital requirement (MCR)
- Solvency Capital Requirement (SCR)

**Pillar 2:** Qualitative requirements and supervisory review
- Governance, risk management and required functions
- Own risk and solvency assessment
- Supervisory review process

**Pillar 3:** Reporting, disclosure and market discipline
- SFCR and RSR
- Disclosure
- Transparency
- Support of risk-based supervision through market mechanisms

Market-consistent valuation
Risk Based requirements

Business governance
Risk-based supervision

Disclosure
Transparent markets
Whole Balance Sheet
Solvency II Balance Sheet

**Assets**

- Investments
- Reinsurance recoverable
- Participations

**Liabilities**

- Basic own funds
- Subordinated

**Technical Provisions**

- Risk Margin
- Best Estimate
- Market Value

**Other Liabilities**

- Non-Hedgeable: (Best Estimate + Risk Margin)
- Hedgeable (Market value)
Solvency II vs. Accounting Balance Sheets

Solvency II balance sheet

Typical Solvency I balance sheet

Proposed IFRS balance sheet
Market consistency

**Definition:** 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 (Article 75(1)(b), Solvency II Directive)

→ Value based on

- Observable market values
- Market value of a replicating portfolio of assets
- Model calibrated to be consistent with what can be observed in the market

Consistent valuation of assets and liabilities
Volatility

The illiquidity premium
- Tested under QIS5, not clear yet how it will be applied under Solvency II
- discount rate = risk free interest rate + spread for corporate bond illiquidity

Illiquidity $\rightarrow$ higher discount rate $\rightarrow$ relief on liability side of BS

The total balance sheet approach

Net Asset Value $\text{NAV}(1)$

Assets $\rightarrow$ Liabilities

Increase in interest rate

$\text{NAV}(2)$

For well matched firms $\text{NAV}(1) \approx \text{NAV}(2)$
Comparing results

Example 1

Ratio = 200%

- £100 Own funds
- £50 Capital requirement

SI to SII

- £300 Own funds
- £200 SCR

Ratio = 150%

Example 2

- £100 Own funds
- £50 Capital reserves

SI to SII

- £300 Own funds
- £200 SCR

- £100

Need to consider excess own funds

NB: comparing solvency ratios alone may be misleading
Comparing results

Key considerations when comparing results include:

- Solvency I (SI) methodology varies by country
- Comparing like with like, i.e. ICAS or SI
- Methodology for calculating SCR: solo and group
- Excess own funds

Not just the solvency ratio
Calculation of TP: Categorisation

Technical Provisions

Hedgeable
- Market Valuation

Non-Hedgeable
- Best Estimate
- Risk Margin

Discounted at the Risk Free Rate
Calculation of TP: risk free rates

• Discount rate: ‘relevant risk free rate term structure’

• The same discount rates for all insurers across Europe

• Illiquidity premium was tested under QIS5

• The rate to be used will depend on the currency and duration of the liability
Illiquidity premium

- Current UK regime based on asset return
- In QIS5 allowance for illiquidity premium determined by yield on notional reference portfolio
- Issue particularly relevant for long-term contracts with predictable cash flows
- QIS5 also tested under stressed market conditions
- Three ‘buckets’ under QIS5
- How applied under Solvency II not yet known

Based on the QIS5 technical specifications
Expected profit in future premiums

- Abbreviated to EPIFP
- QIS5 attempted to value EPIFP
- Relates only to existing business
- Not equivalent to value-in-force:
  - Premiums already received not included
  - Trying to identify the profit component from premiums not yet received
  - Exist to the extent that they reduce technical provisions, thereby increasing the excess of assets over liabilities via reserves
Expected profit in future premiums

- Solvency II’s economic approach aims to realistically value assets and liabilities, thereby making reserves realistic also
- Reserves can be written down and meet the criteria for loss absorbency for Tier 1
- A lapse rate is set in the calculation of technical provisions (TP)
- Liabilities are stressed for the SCR calculation

TP and SCR calculations adequately address the risks associated with future premiums
Contract boundaries

QIS5 definition: ‘where there is an unlimited ability to amend premiums’

→ Should reflect the obligation

• Future business excluded where unlimited ability to amend premiums exists

• Inconsistency with proposed IFRS Phase II definition

• ‘Unlimited ability’ & treating customers fairly
Capital resources: Own Funds

Note: slides in this section based on information contained in the level 1 Directive text and QIS5 technical specifications
Own Funds - FAQs

• Limits and tiering structure
• Own fund characteristics
• EPIFP vs VIF – expected profits in future premiums vs value in force
• Grandfathering
• Other issues in development
Limits

**SCR**

- **Total tier 1 items at least 50% of SCR**
  - Tier 1 unrestricted basic own funds
  - Tier 1 restricted basic own funds
  - Tier 2 basic own funds
  - Tier 2 ancillary own funds
- **Total tier 3 less than 15% of SCR**
- **Restricted to 20% of Tier 1**

**MCR**

- **Total Tier 1 items at least 80% of MCR**
  - Tier 1 unrestricted basic own funds
  - Tier 1 restricted basic own funds
  - Tier 2 basic own funds
- **Total Tier 2 basic own funds no more than 20% of the MCR**
  - Tier 2 basic own funds
- **Restricted to 20% of Tier 1**

Based on QIS5 technical specification
Limits

• Available own funds include all items that meet the criteria for Basic own funds or Ancillary own funds

• All unrestricted Tier 1 basic own funds are eligible; restricted Tier 1 own funds are eligible subject to the 20% limit; Tier 2 and Tier 3 are eligible subject to applying the limits

• Limits based on SCR/MCR
  – reduced importance of gearing (no gearing except for restricted Tier 1)
  – volatility of SCR becomes important

• Capital ratios and public disclosure – Eligible own funds/SCR
## Tiering

<table>
<thead>
<tr>
<th></th>
<th>Basic Tier 1 Unrestricted</th>
<th>Basic Tier 1 Restricted</th>
<th>Basic Tier 2</th>
<th>Basic Tier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Paid up</strong></td>
<td>Paid up</td>
<td>Paid up</td>
<td>Paid up or called up</td>
<td>Paid up or called up</td>
</tr>
<tr>
<td><strong>Loss absorbency</strong></td>
<td>Going concern and winding up</td>
<td>Going concern and winding up</td>
<td>At least in a winding up</td>
<td>At least in a winding up</td>
</tr>
<tr>
<td><strong>Subordination</strong></td>
<td>Most subordinated</td>
<td>May rank ahead of Tier 1 Unrestricted</td>
<td>After obligations to policyholders and non-subordinated creditors</td>
<td>After obligations to policyholders and non-subordinated creditors</td>
</tr>
<tr>
<td><strong>Permanence/ Sufficient duration</strong></td>
<td>Perpetual</td>
<td>Min 10 Years</td>
<td>Min 5 Years</td>
<td>Min 3 Years</td>
</tr>
<tr>
<td><strong>Lock-in on breach of SCR</strong></td>
<td>Perpetual</td>
<td>Lock-in on breach of SCR</td>
<td>Lock-in on breach of SCR</td>
<td>Lock-in on breach of SCR</td>
</tr>
<tr>
<td><strong>Flexibility of coupon/dividend payments</strong></td>
<td>Full, cancelled on breach of SCR</td>
<td>Full, cancelled on breach of SCR</td>
<td>Deferred on breach of SCR</td>
<td>Deferred on breach of MCR</td>
</tr>
<tr>
<td><strong>Incentives to redeem</strong></td>
<td>None</td>
<td>None</td>
<td>Limited</td>
<td>Limited</td>
</tr>
</tbody>
</table>

Tier 2 Ancillary Own Funds should meet the Tier 1 Basic criteria once called up and paid in. Tier 3 Ancillary Own Funds should meet the Tier 2 Basic criteria once called up and paid in.

Based on QIS5 technical specification

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Own funds criteria

- Elimination of synthetic maturity – maturity based on first call date
- Amortisation not required due to the existence of a lock-in
- Dated restricted Tier 1 and Tier 2 – benchmark durations but sufficient duration to meet insurance and reinsurance obligations

Based on QIS5 technical specification
EPIFP vs VIF

- Expected profits in future premiums – the profit component from premiums not yet received on existing business
- No identification vs. calculation and relegation
- Difficulties with consistent calculation

Based on QIS5 technical specification
Grandfathering

• Existing instruments unlikely to comply with full Solvency II criteria
  – loss absorbency
  – lock-in (no redemption whilst in breach of SCR)
  – cancellation/deferral of dividend payments on breach of SCR
  – full flexibility of coupon payments

• Grandfathering subject to limits for a fixed period, as opposed to phasing out over time (e.g. Basel III approach)

• Grandfathering period still subject to negotiation

Based on QIS5 technical specification
Other issues in development

• Ring fenced funds – applies to certain assets restricted in their use, e.g. with profits funds.

• Ancillary own funds – subject to supervisory approval and associated process (Article 90)

• Alternative coupon satisfaction mechanism – included in QIS5 but not yet clear whether will be permitted for Tier 1

• Deferred tax assets – relegated from Tier 1 to Tier 3 under QIS5

• Participations – significant investment in other companies tested in QIS5 and additional information gathered
The SCR
What is the SCR?

- **SCR: 99.5% Value at Risk over 1 year**
Calculating the SCR

Active choice re methodology to calculate the SCR depending on nature, scale and complexity of the business and proportionality.
Ladder of Supervisory Intervention

- Own Funds in excess of Capital Requirements
- Supervisory Intervention
- Regulatory Action
- Solvency Capital Requirement
- Minimum Capital Requirement

- Common European intervention tools
- Article 138 refers to a ‘dampener’ that may be applied in the event of an exceptional fall in financial markets. This is subject to further clarification.
The standard formula

Based on QIS5 technical specification
The standard formula – asset charges

Example capital charges for various assets from the QIS5 technical specification

<table>
<thead>
<tr>
<th>SCR sub module</th>
<th>Capital charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mkt - equity</td>
<td>Global - 39%</td>
</tr>
<tr>
<td>Mkt - equity</td>
<td>Other - 49%</td>
</tr>
<tr>
<td>Mkt - property</td>
<td>25%</td>
</tr>
<tr>
<td>Mkt - spread</td>
<td>5.5%</td>
</tr>
<tr>
<td>Mkt - spread</td>
<td>11%</td>
</tr>
<tr>
<td>Mkt - spread</td>
<td>12.5%</td>
</tr>
<tr>
<td>Mkt - spread</td>
<td>25%</td>
</tr>
<tr>
<td>N/A</td>
<td>0%</td>
</tr>
</tbody>
</table>

- **Other sub modules to consider:** concentration & counterparty default
- **Diversification** between risk (sub) modules → correlation matrix
- **Symmetric dampener** a countercyclical measure, formula yet to be set

Based on QIS5 technical specification
Risk diversification example

Market risk module

3 market risk sub-modules

Correlation matrix

Correlation matrices will be set at level two and apply at two levels:

i) sub-module to module; and
ii) module to SCR
The standard formula: corporate bonds

• Charge for bonds based on spread risk and interest rate risk; interest risk can only be eliminated when duration of assets and liabilities match

• Wider impact of Solvency II:
  – Charge for swaps
  – Prudent Person Principle
  – Reinvestment risk in ORSA
  – STANDARD FORMULA ONLY
  – Assumption firms invest purely to minimise standard formula SCR
Next steps

SCR not yet finalised

EIOPA taskforces work in progress

• Non-life calibration

• CAT taskforce
Internal Models
Calculating the SCR

- Standard Formula
- Standard Formula with simplifications
- Standard Formula with USPs
- Partial Internal Models
- Full Internal Model

Risk Sensitivity vs. Complexity of the calculation
What is an internal model?

The Internal Model is more than simply a calculation engine:

- Should be an integral part of the risk management system
- Meet the tests and standards for internal model approval

- Should better reflect the risk profile than the standard formula
- Only allowed if approved by the supervisory authority
Will the FSA benchmark internal models against the standard formula? No!

Solvency II will require firms to hold capital which is appropriate for the **firms’ risk profile** to the level of the agreed prudential safety objective. So internally modelled capital requirements might be **higher or lower** than the standard formula.

The FSA considers benchmarking as a useful tool as part of a larger toolkit of techniques when reviewing the appropriateness of internal models. We recognise that benchmarks on their own are not an effective way to take into account the different risk profiles of firms.

See Paul Sharma’s Myths and Challenges, ABI SII Conference, 20 October 2010
QIS5

Anthony Brown
QIS5 - Background

What is it?
European wide field study, not a stress test
Entire Solvency II balance sheet

Why?
Three reasons:
- Sense check and input to negotiating process for SII development
- Practical implications of firms collecting data
- Foster preparedness and awareness
QIS5 – Firms’ disclosure of results

Strong and clear ABI steer on no publication in UK

Because:

• Not final implementation of Solvency II
• Not audited or regulated, on ‘best efforts plus’
• A number of options tested such as transitionals (e.g. illiquidity premium, grandfathering of certain instruments and group specificities)
• Significant differences of interpretation and application of key areas
• Internal model data often not included
• 2009 year end only
QIS5 – Next Steps

Submissions
Received in October and November 2010

Publication
EIOPA publication Early March
FSA publication Timed with EIOPA
Firm’s disclosure Not expected, and discouraged by the ABI

Continuing FSA supervisory engagement with firms

Input to development of Solvency II
Omnibus II
Level 2
Level 3
Pillars 2 and 3

Victoria Raffé
The building blocks of governance in Solvency II reflect best practices already found within well governed firms. And although they may not represent entirely new ideas or practices, the Directive strengthens their holistic nature, more clearly tying various aspects of ongoing governance to risk and capital management.

*The building blocks do not cover all of the areas of Governance
ORSA – what are the key elements?

Business needs to incorporate its regulatory requirements within its overall strategy and operations.

**Management body**
- Objectives/purpose
- Solo/group
- Scope
- Ownership
- Embedding/use
- Granularity
- Frequency

**Process**
- Methodology
- Roles and responsibilities
- Data capture and flows
- Validation
- Dependencies: SFCR & RSR
- Systems and controls
- Change control

**Report**
- Strategy
- Business plan
- Statement of risk appetite
- Governance and systems of risk management
- Risk tolerance: capacity, limits etc
- Assumptions
- ORSA vs. SCR
- Results/analysis
- Use of ORSA for decisions
- Sign off

Report: sign off by management body
Pillar 2 – Prudent Person Principle

• Greater investment freedom and responsibility
• Article 132 Directive
• Applies to all assets of an undertaking

• Prudent person => care, skill and diligence

• PPP reflects underlying requirements in all three Pillars

• An undertaking must demonstrate it can
  – Identify, measure, manage, control and report investment risks
  – Ensure security, liquidity and profitability of portfolio as a whole
  – Has assets appropriate to the nature and duration of liabilities
### Pillar 3: Reporting requirements overview

<table>
<thead>
<tr>
<th>Information to be received by the supervisory authority (FSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Report to supervisors and public disclosure at predefined points</strong></td>
</tr>
<tr>
<td><strong>Regular Supervisory report (RSR)</strong>&lt;br&gt;Art. 35(1)</td>
</tr>
<tr>
<td>All information necessary for the purposes of supervision</td>
</tr>
<tr>
<td>- Qualitative report</td>
</tr>
<tr>
<td>- Quantitative reporting templates</td>
</tr>
<tr>
<td>- Annual and quarterly</td>
</tr>
<tr>
<td>Art. 35(2)(a) (ii) and Art. 54(1) – upon occurrence of predefined events</td>
</tr>
<tr>
<td>Art. 35 (2) (a) (iii) – during enquiries regarding the situation of an undertaking</td>
</tr>
</tbody>
</table>

What is included in the public and private reports, and audit requirements are yet to be specified
More information can be found on our dedicated web pages: www.fsa.gov.uk/solvency2

If you have any queries relating to Solvency II please get in touch by email solvency2@fsa.gov.uk