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Motivation for Solvency II
Altered situation for the insurance industry

What’s our industry facing today?

Capital markets
- Low interest rates
- Volatile share markets
- Financial crisis

Creditor protection
- Increasing significance of rating
- Increasing importance of disclosure

Shareholder value
- More transparent accounting
- Call for greater returns

Underwriting
- Pressure on margins
- More volatile results
- Large losses and catastrophe claims
- Price deregulation

CAPITAL MANAGEMENT
(risk/return considerations)
becoming more important

- Solvency capital
- Rating capital
- Risk adjusted capital
- Available capital
What is Solvency II all about?

Key message Swiss Re:

"Rather than a rigid, rule-based approach, Solvency II uses a risk-based assessment of the assets and liabilities, based on economic principles. This complements our approach of integrated risk management as well as effective asset/liability matching.

Solvency II will create state-of-the-art risk management and bring greater transparency."
Objectives of Solvency II

- Enhance policyholder protection
- Better match to the true risks of an insurance company
- Consistency across financial institutions
- Principle-based but without undue complexity
- Assessment of an insurer’s overall solvency situation
- Basel-type three-pillar approach adapted to insurance
- Two-level approach to capital requirements:
  1. Solvency Capital Requirements (SCR)
  2. Minimum Capital Requirement (MCR)
- Harmonise quantitative and qualitative supervisory methods
Solvency supervision in emerging countries is moving towards RBC, whereas Europe, including the UK and Switzerland, are using a model-based approach.
Objectives and key principles
Three pillar structure

**Pillar I**
**Quantitative Requirements**
- Minimum capital requirement
- Solvency capital requirement
- Standard approach
- Internal model
- Risk dependencies
- Risk mitigation
- Technical provisions

**Pillar II**
**Qualitative Requirements**
- Corporate governance
- Internal control processes
- Risk management function
- Asset & liability management
- Supervisory review process
- Supervisory powers
- Safety measures
- Solvency control levels

**Pillar III**
**Market Discipline**
- Supervisory disclosure
- Public disclosure
Implementation of Solvency II

The requirements of the three pillars of Solvency II have to be embedded in an overall Risk Management Framework including all steps of the value chain of an insurance company.
# Solvency II – Key elements

## Consideration of all risk categories
- Insurance risk
- Market risk
- Credit risk
- Operational risk

## Probabilistic risk measurement
- Solvency II risk measure will be based on a Value at Risk (VaR) level of 99.5% which is equivalent to a 0.5% target default probability, and specifies a time horizon of one year.

## Economic balance sheet
- Introduction of market-consistent valuation of balance sheet items
- Increased volatility of balance sheet items expected

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The Solvency I regime only considers the insurance risk and in some extent the market risk. Other risk categories are covered in different regulatory frameworks (e.g., upper limits for investments in certain asset categories).
The economic balance sheet
General principles

Market value of assets
- Wherever possible, market-consistent valuation is based on observable market prices (marking to market)
- If such values are not available, a market-consistent value is determined by
  - examining comparable market values,
  - taking account of liquidity requirements and other product-specific features
  - on a model basis (marking to model)

Market consistent value of liabilities
- Best estimate =
  Expected value of liabilities, taking into account all up to date information from financial market and from insurance
- All relevant options and guarantees have to be valued
- No explicit or implicit margins
- Risk margin as an explicit allowance
Solvency II – Economic balance sheet gross & net

Gross situation

- Market value of assets
  - Market risk

- Excess capital
  - SCR
  - MCR
  - Risk margin
  - Discounted best estimate of gross liabilities

- Own Funds
  - Market-consistent value of liabilities

Net situation (reinsurance risk mitigation)

- Market value of assets
  - Market risk

- Excess capital
  - SCR
  - MCR
  - Risk margin
  - Discounted best estimate of gross liabilities

- Own Funds
  - Market-consistent value of liabilities
  - UW risk
  - UW risk

- Credit risk
  - Best estimate of reinsurance asset
Timeframe and stakeholders
Solvency II - Timeframe

2000 ... 2007 2008 2009 2010 2011 2012 ...

Draft framework Directive (published (10 July 2007)

QIS 1-3 (2005-2007)

QIS 4

QIS 4B (eg NL)

QIS 5

QIS 6 ?

Level 1: Framework Directive
Setting out basic enduring principles, or political choices, underpinning the solvency system.

Level 2: Implementing Measures
Formulating more detailed, technical rules.

Level 3: Supervisory Standards
Setting out guidelines for national supervisors to ensure a consistent interpretation and application.

Level 4: Evaluation
Enables the European Commission to monitor compliance and enforcement.
Solvency II stakeholders

Decision Making Level

- European Commission
- European Parliament
- Council of Ministers

Advisory Level

- EIOPC (or Perm. Reps.)
- Commission Services
- Political Comments
- Technical advice
- Call for advice (CfA)

Working Level

CEIOPS (Committee of European Insurance and Occupational Pensions Supervisors)

Expert Groups

- Board
- Internal models
- Financial requirements
- Group supervision
- Supervisory Review
- Consultative Panel
Comparison Solvency I & II
Basic principles of Solvency II compared to Solvency I

The existing Solvency I regime

Fixed formula approach determining capital requirements based on insurance risks held

Capital requirements: Life
4% of net gross mat. provisions + 3‰ of net sum at risk

Capital requirements: Non-Life
Premium index: 16/18% of Net premiums earned or Claims index: 23/26% of Net claims incurred

Key Conclusions
- Volumes of business to drive capital requirements
- Only insurance risk considered
- Partial recognition of reinsurance solvency relief to 50%/15%

The anticipated Solvency II regime

Economic framework taking into account the entire risk landscape and risk management framework

The principles of Solvency II

Pillar I
- Quantitative
  - MCR / SCR
  - Diversification
  - Risk Mitigation
  - Assets/Liabilities

Pillar II
- Qualitative
  - Risk Governance
  - Supervision
  - Process/Control

Pillar III
- Market Disclosure
  - Supervisory Disclosure
  - Public Disclosure

Key Conclusions
- Volatility of business to drive capital requirements
- Insurance, market, credit and operational risk considered
- Broader recognition of risk reduction techniques (reinsurance)
## Objectives in comparison to Solvency I

<table>
<thead>
<tr>
<th>Consistency of regulatory framework</th>
<th>Solvency I</th>
<th>Solvency II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regulatory arbitrage possible due to different local regimes</td>
<td>One consistent economic framework within the EEA*</td>
</tr>
<tr>
<td>Policyholder protection</td>
<td>Policyholder protection based on mechanistic, unspecific formula</td>
<td>Policyholder protection based on economic principles and integrated risk approach</td>
</tr>
<tr>
<td>Alignment of capital requirements with economic risk modelling</td>
<td>Rules do not reflect economically risk modelling</td>
<td>Rules require risk modelling on economic principals</td>
</tr>
<tr>
<td>Consideration of risk mitigation tools</td>
<td>Recognition of traditional reinsurance</td>
<td>Material economic risk transfer will qualify for capital relief</td>
</tr>
<tr>
<td>Introduction of mark-to-market valuation of balance sheet</td>
<td>Statutory approach with prudence reserves and investment regulations</td>
<td>Economic approach, plus additional market value margin for technical provision</td>
</tr>
</tbody>
</table>

* European Economic Area
## Comparison of Solvency I & II

<table>
<thead>
<tr>
<th>Key elements of Solvency II</th>
<th>Solvency I</th>
<th>Solvency II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk landscape</td>
<td>Insurance risk</td>
<td>Insurance, market, counterparty default and operational risk</td>
</tr>
<tr>
<td>Risk models</td>
<td>One simple formula (fixed ratio approach)</td>
<td>Standard formula (factor-based approach) or internal model</td>
</tr>
<tr>
<td>Risk mitigation</td>
<td>Traditional and alternative reinsurance</td>
<td>Instruments with economic effect</td>
</tr>
<tr>
<td>Diversification</td>
<td>-</td>
<td>Consideration varies based on risk model used</td>
</tr>
<tr>
<td>Capital adequacy</td>
<td>Prudential valuation of balance sheet items</td>
<td>Market-consistent valuation of balance sheet items</td>
</tr>
<tr>
<td>Risk management framework</td>
<td>-</td>
<td>Requirements based on complexity of business mix</td>
</tr>
<tr>
<td>Supervisory review</td>
<td>-</td>
<td>Approval of risk models, ladder of intervention</td>
</tr>
<tr>
<td>Supervisory disclosure</td>
<td>-</td>
<td>Enhanced requirements for supervisory process</td>
</tr>
<tr>
<td>Public disclosure</td>
<td>-</td>
<td>Enhanced requirements for annual reporting process</td>
</tr>
</tbody>
</table>
Quantitative impact studies (QIS)
Intention of the EU

- To test the practicability of the technical specification of Solvency II in respect of the calculation of the new solvency capital requirements (SCR) and the minimum capital requirements (MCR)

- CEIOPS conducted so called Quantitative Impact Studies (QIS)

- The results of QIS are building an important part for the political discussion on the framework directive and the implementation process
What is a Quantitative Impact Study (QIS)

- “Test run” to prove the practicability of the draft Framework Directive of Solvency II
- CEIOPS asks the national supervisors to invite the national insurers, insurance groups and reinsurance companies to carry out calculations in line with the draft directive
- The undertakings participating in the QIS have to complete a spreadsheet and a questionnaire summarizing the results
- The participants are also invited to provide feedback on the practicability of the calculation
- The results have to be submitted to the national regulators
- The national regulators provide a consolidated version to CEIOPS in a respective timeframe
QIS 5 –
High level milestone plan

- Stakeholder meeting
- Draft Specifications from CEIOPS
- Public hearing
- Consultation phase: 15 Apr 2010 to 4 May 2010
- End of consultation phase: 20 May 2010
- Final Specific. from Commission: End June 2010
- Start of QIS 5 Exercise: August 2010
- Solo-Submission: 31 Oct 2010
- Group-Submission: 15 Nov 2010
- Results of QIS 5: April 2011

- Consultation phase
- QIS 5 Exercise
QIS 4 versus draft QIS 5

Key features:

- EU Commission (not CEIOPS) will release the specifications for QIS 5 (draft specificatoins released on April 15)
- Refinement of Group Calculations
- Complete remodelling of P&C Cat model for the Standard Formula
- Enhanced recognition of non-proportional reinsurance in the Standard Formula

Key concerns of the industry addressed in draft QIS 5:

- Excessive calibration of parameters in the Standard Formula would lead to an
  - unreasonable increase in required capital
  - unreasonable decrease in available capital
  - what would lead to a material decrease in the solvency ratio for the whole industry
- Even though these concerns have been addressed in draft QIS 5, the industry must remain alert to ensure no backlashes arise
Solvency II – Impact on solvency level

Solvency ratio – industry wide (EU)

<table>
<thead>
<tr>
<th>Solvency Ratio</th>
<th>QIS 4 FY07 (official)</th>
<th>QIS 4 FY08 (CRO)/FY09e (JPM) (estimated)</th>
<th>QIS 5 (CP¹ based) FY08 (CRO)/FY09e (JPM) (estimated)</th>
<th>QIS 5 FY09</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRO Forum</td>
<td>210%</td>
<td>140%</td>
<td>75%</td>
<td>0%</td>
</tr>
<tr>
<td>J.P.Morgan</td>
<td>210%</td>
<td>150%</td>
<td>60%</td>
<td>50%</td>
</tr>
</tbody>
</table>

² Consultation papers

- Stable parameters (QIS 4)
- Impact of financial crisis on 2008 balance sheet figures
- Very conservative parametrisation based on the Consultation Papers
- Balance sheets recovering
- Less capital intensive parametrisation of the Standard Formula
Solvency II and the financial crisis
The economic environment – is in its deepest post-World War II recession

- The downturn is global: the International Monetary Fund (IMF) projects output to decline in countries representing three quarters of the global economy
- The number of business insolvencies and corporate bond defaults are rising rapidly. All major economies and all sectors are affected
- Capital costs are high; access to capital markets is restricted
- The economic outlook is highly uncertain; risks are biased to the downside
- Profitability in credit insurance has deteriorated.

Crisis reinforces the case for Solvency II
Banking versus insurance – Systemic crisis versus solvency issue

<table>
<thead>
<tr>
<th>Fundamental difference between banks and insurance companies</th>
<th>Issues</th>
<th>Insurers</th>
<th>Banks</th>
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<tr>
<td><strong>Insurance:</strong></td>
<td></td>
<td></td>
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<tr>
<td>▪ Cash in first, claims payment at a later date</td>
<td>Main problem</td>
<td>Losses on investment portfolio and on shareholder capital</td>
<td>Interbank market collapsed</td>
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<td>▪ Credit or asset crisis second order effect through assets</td>
<td>Operational problems</td>
<td>Business as “normal”: cover provided and claims paid</td>
<td>Banking system close to collapse</td>
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<td><strong>Bank:</strong></td>
<td>Trust in the system</td>
<td>No indication for policyholders losing trust – no run on insurers</td>
<td>Run on the bank prevented by Central banks’ guarantees</td>
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<td>▪ Cash out first, get interest and payback at a later date</td>
<td>Government support</td>
<td>Confined to very few cases</td>
<td>Broad intervention of central banks and governments</td>
</tr>
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<td>▪ Withdrawals (run) had a direct effect on the credit and asset crisis</td>
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Fundamental difference between banks and insurance companies:

Insurance:
- Cash in first, claims payment at a later date
- Credit or asset crisis second order effect through assets

Bank:
- Cash out first, get interest and payback at a later date
- Withdrawals (run) had a direct effect on the credit and asset crisis

Issues:
- Main problem
- Operational problems
- Trust in the system
- Government support

Insurers:
- Losses on investment portfolio and on shareholder capital
- Business as “normal”: cover provided and claims paid
- No indication for policyholders losing trust – no run on insurers
- Confined to very few cases

Banks:
- Interbank market collapsed
- Banking system close to collapse
- Run on the bank prevented by Central banks’ guarantees
- Broad intervention of central banks and governments
Outcome of the financial crisis

New EU supervisory architecture will strengthen European authorities and introduce new layer of supervision.
Conclusions
Conclusions

- Solvency II will lead to a more encompassing picture of an insurer’s solvency position
- Economic principles and encompassing risk assessment will allow the unambiguous identification of the insurer’s risk landscape
- Capital-saving effect of diversification and risk transfer will become measurable
- This will
  - foster a holistic and forward-looking appreciation of risk
  - eliminate false incentives to take risks
  - enforce risk-adequate pricing and focus on economic value creation, ie strict enforcement of a risk/return focus
  - require up-to-date data information and risk management systems
- Overall, Solvency II will lead to a more transparent, professional and thus more secure insurance market.
Thank you

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