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Landscape of Risk Transfer Solutions

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The traditional life insurance model could be crushed by the weight of change

Economic, political and regulatory forces

Interest rate risk/guarantees

Economic Downturn

Erosion of tax advantages

Solvency II

Savings business less attractive

Annuities more difficult to provide

Increased focus on regulation of distribution

High capital requirements

How do life insurers respond to these challenges?

The insurance industry is acting to the new challenges in various ways

Implementing economic capital frameworks	• Implementation of economic based steering processes, i.e. risk based capital steering, such as Economic Value Management, SII internal model, SII Standard Formula • Measure economic value creation that guides business decisions in a risk based context
Integrated risk and capital management	• ERM framework for disciplined risk taking and integrated risk and capital management
Enhanced capital fungibility	• Partial recognition of own funds from subsidiaries in Group. Own funds will increase focus of companies on capital optimisation to increase fungibility
Corporate restructuring	• Deploy capital to businesses with the most economic value potential • Strengthen flexibility to capitalise on emerging opportunities
New product development	• Develop less capital intensive products • Adjust existing savings products and annuity products • Move into risk protection products

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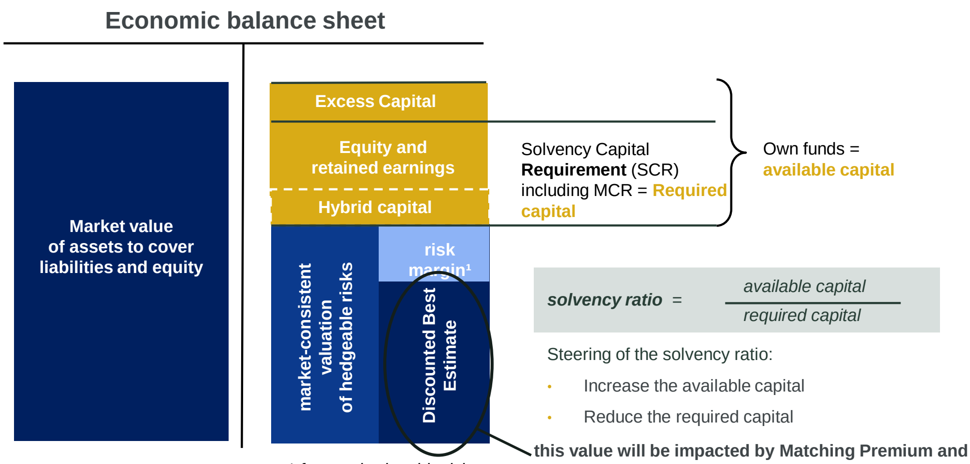
Implementing economic capital frameworks

The Solvency II economic balance sheet

Building blocks and impact of Long Term Guarantees



solvency ratio = $\frac{\textit{available capital}}{\textit{required capital}}$

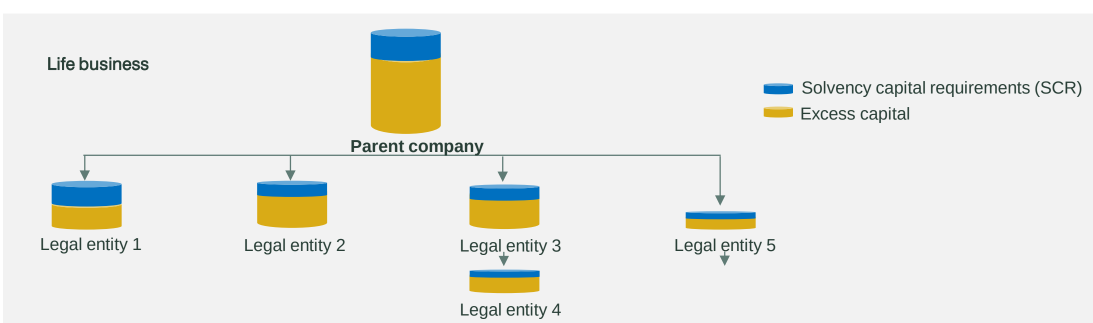
Steering of the solvency ratio:

- Increase the available capital
- Reduce the required capital

¹ *for non-hedgeable risks*

Enhanced capital fungibility

Increased focus on enhancing capital fungibility between subsidiaries and parent



- Level of capital adequacy comfort level? Is excess capital fungible and can be transferred from one jurisdiction to another without any hurdles?
- Does the national or group supervisor restrict the capital transfer to or from the subs?
- How much capital can be transferred from one jurisdiction to another in case one legal entity has a stressed capital position (e.g. due to economic crisis)?
- Legal hurdles to the free flow of capital between legal entities imposes an opportunity cost to the parent company that can be reduced e.g. by alternative reinsurance solutions

New product development

Shift towards capital light and risk products

- **Shift towards capital light savings products**
  - Traditional unit-linked, term assurance
  - Unit-linked with "light" guarantees (e.g. GMDB, premium guarantee)
  - Life policies with yearly adjustable interest rate guarantee and premium guarantee
  - Term annuities
- **Move towards risk products**
  - Mortality
  - Disability
  - Long-term care
  - Private health covers without aging reserves
- **But more innovation in terms of distribution channels and products will be needed to remain competitive …**

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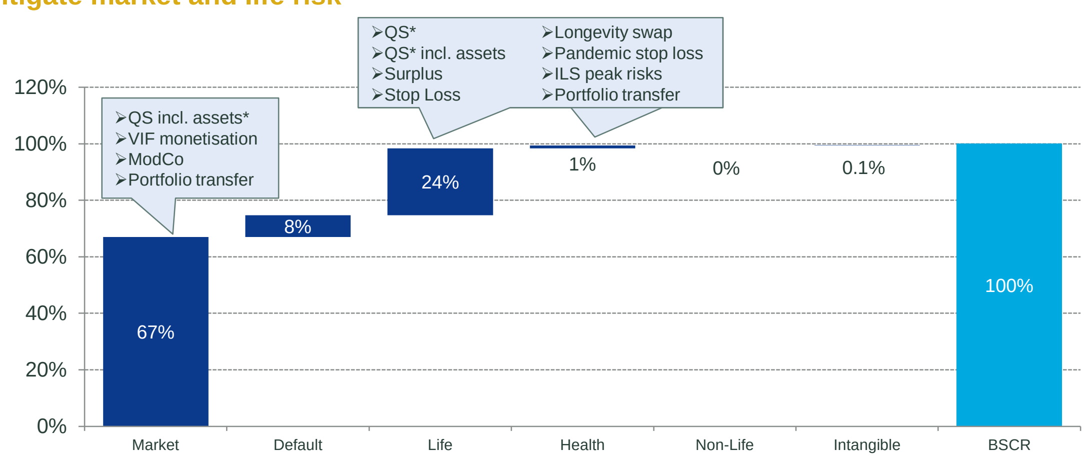
Reinsurance Solutions

- **Proportional Reinsurance**
  - **Quota Share:** same percentage of all policies written is ceded to reinsurer (e.g. 90% of underwriting results ceded)
  - **Surplus:** insurer only retains face amount up to retention limit of each policy and cedes the risk above this limit to reinsurer
- **Non Proportional Reinsurance**
  - **Excess of Loss:** Claims on a per-policy exceeding a retention limit or claims triggered by a pre-determined event (e.g. pandemic event)
  - **Stop-loss:** Reinsurer covers aggregate claim amount on portfolio of policies exceeding a threshold
- **Non Traditional Solutions**
  - **Insurance Swaps:** Cedant pays fixed leg (expected payments) and reinsurer pays floating leg (actual payments).
  - **Insurance Linked Securities (ILS):** SPV* issues a bond with risk tied to an insurance event (i.e. mortality risk). If event is triggered, investors would loose portion of their principal and insurer receives a loss payment from SPV.
  - **Financial Reinsurance:** Reinsurance with additional financial motivation beyond risk transfer such as improving statutory capital, liquidity or accounting P/L. Provides acceleration of future statutory margins at inception (**VIF monetization**).

* SPV stands for Special Purpose Vehicle

Where reinsurance can help? – Solvency II example

Mitigate market and life risk

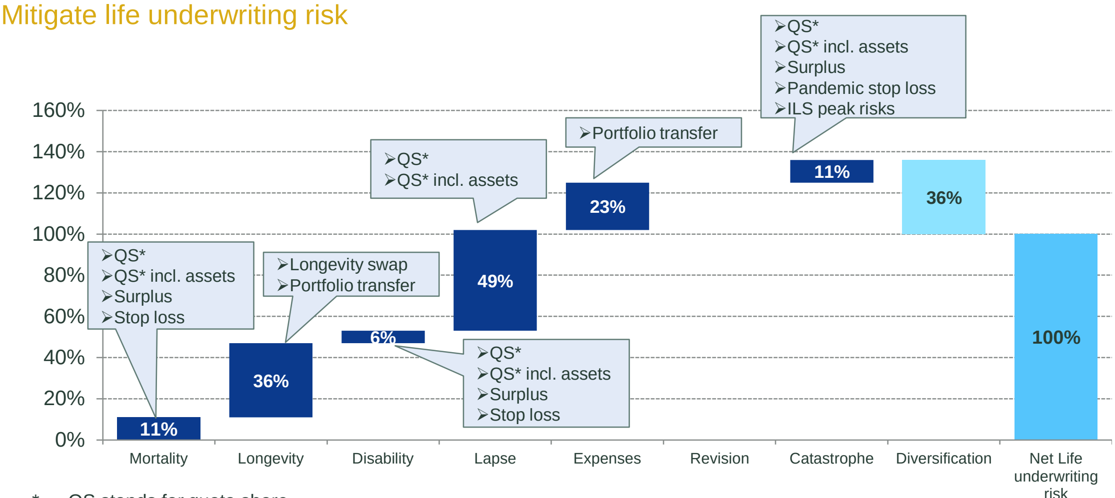


European average
Source: EIOPA Report on QIS 5 for Solvency II (2011)

* QS stands for quota share

Where reinsurance can help – Solvency II example

Mitigate life underwriting risk

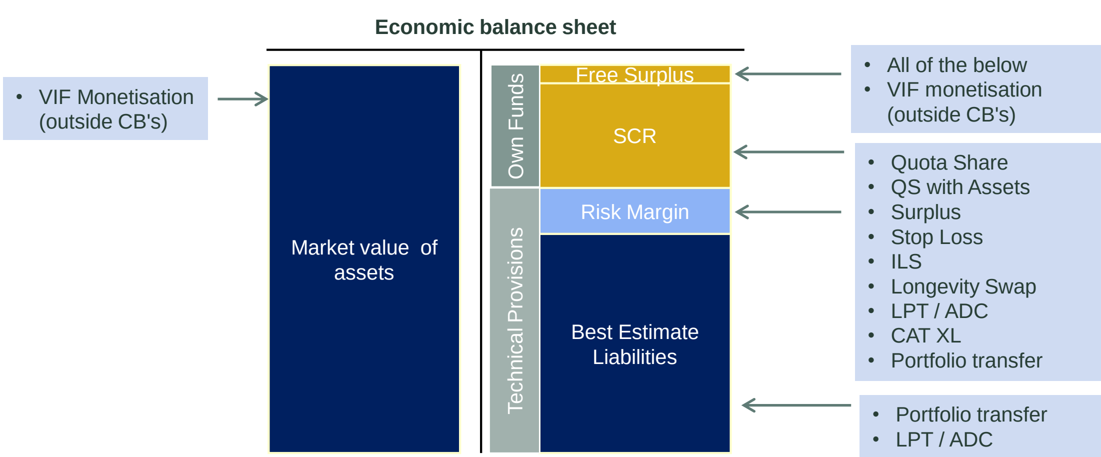


* QS stands for quota share

European average
Source: EIOPA Report on QIS 5 for Solvency II (2011)

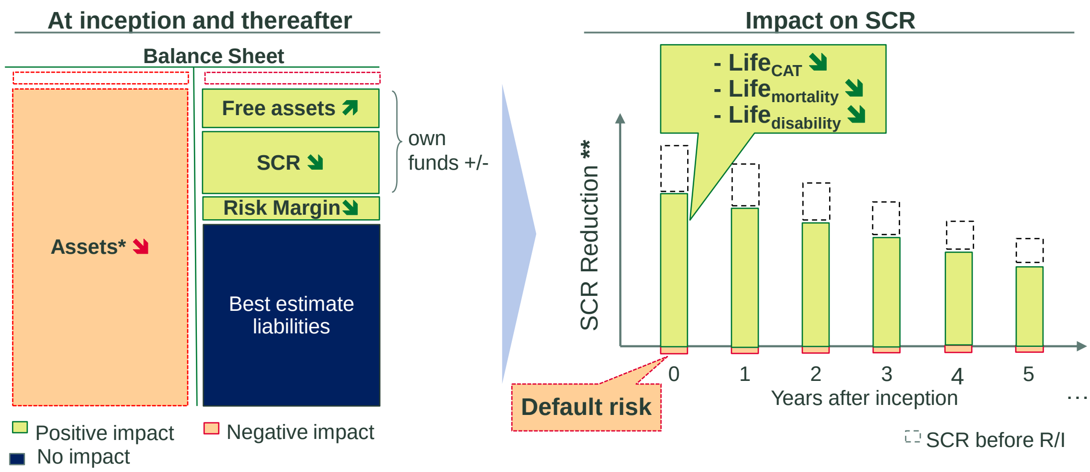
Where reinsurance can help? – Solvency II example

Economic balance sheet perspective



Life Risk Quota Share

Capital implications under Solvency II



* It is assumed that there is a negative reinsurance asset and a reinsurance margin. However, in case of an adverse scenario, the actual technical margin turns negative. Then Own Funds increase with a QS (earnings protection) and therefore there will be a positive reinsurance asset.

** Changes to diversification can improve or reduce the impact of the QS on the SCR depending upon business mix.

Life Risk Quota Share

For which insurers is this an effective solution?

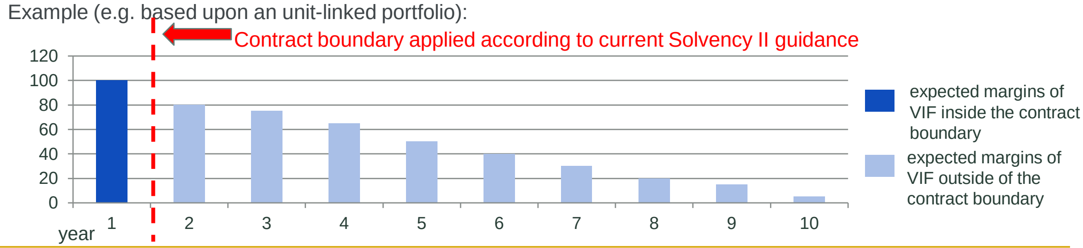
- Mortality and/or Disability risk is an important risk driver in the overall life underwriting risk
- Prospective and Retrospective Quota Shares (attaching on the claims reserves) possible
- Clients with a large disability inforce portfolio

VIF Monetisation (contract boundaries apply)

Capital implications under Solvency II

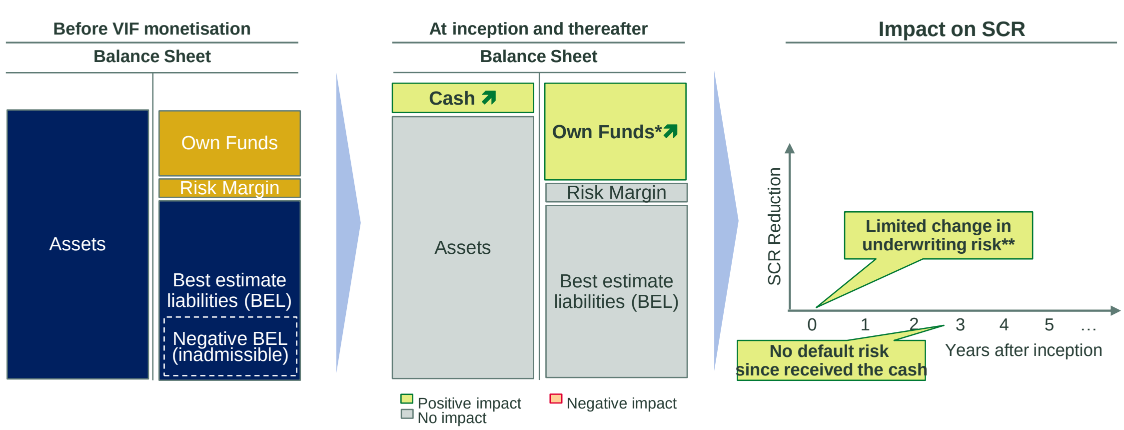
- Contract boundaries can increase the best estimate liabilities as less future cash flows (negative best estimate liabilities or VIF)
- This situation results in a lower level of own funds than would have been the case if all future positive cash flows could have been recognised within the contract boundaries on an economic basis.
- By entering into a reinsurance contract, upfront cash can be provided to the insurer, that is collateralised by the VIF outside the contract boundaries.
- **This solution generates both capital for the insurer and improves its liquidity and capital fungibility as well as provides VIF protection in a potential cat event.**

Example (e.g. based upon an unit-linked portfolio):



VIF Monetisation (contract boundaries apply)

Capital implications under Solvency II



* Current guidance is still unclear as to whether a contingent liability would be required for this solution.

** Small impact on SCR and risk margin.

VIF Monetisation outside contract boundaries

For which insurers is this an effective solution?

- Substantial volumes of margins which are outside contract boundaries, e.g.
  - yearly renewable term
  - group life
  - unit-linked business
- Client is looking to optimise capital adequacy
- Client is looking to build up a capital buffer in order to protect capital against increased volatility of reserves and solvency ratio

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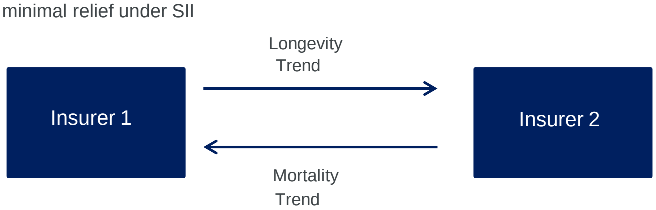
Contingent Reinsurance

- A Contingent Reinsurance cover can provide adequate capital relief upon the occurrence of remote solvency events
  - provides insurer with the availability to draw a reinsurance cover contingent upon suffering a trigger event on its solvency ratio
  - insurer would have the option to choose among other reinsurance covers to bring back its solvency ratio to adequate level

Dual Insurance Swaps

- Swapping one risk for another to achieve a more balance portfolio and diversification benefits (e.g. mortality trend risk for longevity trend)
  - Both legs of the swap could be based on same index or different representative portfolios
  - No initial cash transfer, premiums on both legs are equal
- Implementation Issues
  - Agreement on best estimates
  - Basis of measurement
  - Regulatory minimal relief under SII



Questions

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