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## Accessing diversification under Solvency II: is reinsurance the answer?

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## Overview

Economic and regulatory backdrop

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## The backdrop

- Increasing challenge to enhance performance and returns in response to the evolving regulatory environment and market pressure
- Focus on optimisation to improve capital position and returns

### Regulatory drivers

- Focusing on optimising competitive position under Solvency II
- Risk-based capital regimes outside of Europe
- Increasing complexity of regulations

### Commercial optimisation

### Market drivers

- Enhance investor story and performance
- Optimisation activities of peers
- Low yields economic environment

## Capital management

- Insurers look to improve capital position and returns, as well as to run their business more efficiently. Two options can be explored:
  - **Increase available capital with the objective to:**
    - Increase own funds
    - Ensure fungibility of capital
    - Increase the quality of capital (tiering)
  - **Reduce capital requirements with the objective to:**
    - Maximise diversification
    - Improve overall risk management
    - Reduce targeted risks

⇒ Improve the solvency ratio

## Maximise diversification

We are seeing a number of solutions aiming to maximise diversification in solvency capital requirement and risk margin:

- Establishing a central internal reinsurer to enhance fungible capital across the Group
- Internal reciprocal reinsurance arrangements to balance risks across the different entities within the Group
- Combining the business into one legal entity
- External transactions to lay off concentrations of risk or bring in efficiently diversifying risks



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## Reinsurance

Optimising reinsurance programs

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## Introduction

Optimising the reinsurance program under Solvency 2 allows firms to:

- Reduce capital requirements
- Increase diversification
- Reduce the volatility of the capital ratio
- Protect available capital under stress

Existing reinsurance programs need to be adapted to Solvency 2:

- Structures efficient under Solvency 1 may not be under Solvency 2
- Some widely used structures no longer have the same impact

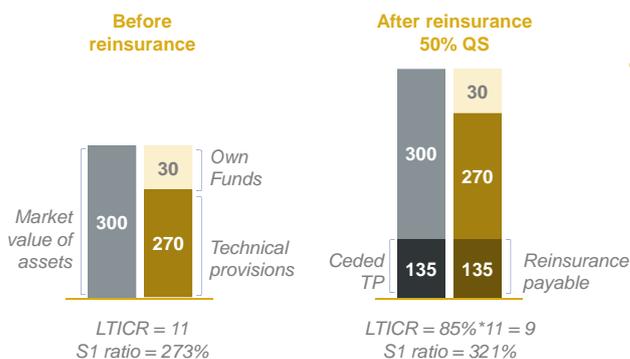


## Comparison of external reinsurance structures

Risks	Impact	Solvency 1	Solvency 2	Implementation under Solvency 2
Quota Share	<ul style="list-style-type: none"> <li>• Ceding a large share of premiums</li> <li>• Sharing risks and profitability</li> <li>• Reducing capital requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Proportional to the ceding rate, subject to Solvency 1 restrictions (e.g. restrictions on LTICR relief)</li> </ul>	<ul style="list-style-type: none"> <li>• Proportional to the ceding rate</li> <li>• Counterparty risk capital</li> <li>• Importance of collateral</li> </ul>	<ul style="list-style-type: none"> <li>• Simple</li> </ul>
Non proportional stop loss	<ul style="list-style-type: none"> <li>• Ceding a limited amount of premiums</li> <li>• Reducing capital requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Limited efficiency</li> <li>• Non proportional mechanisms are not taken into account by Solvency 1</li> </ul>	<ul style="list-style-type: none"> <li>• Efficient if PIM or IM and retention is adapted to the portfolio specificities</li> <li>• Efficient for Cat risk</li> </ul>	<ul style="list-style-type: none"> <li>• Simple</li> </ul>
VIF monetisation	<ul style="list-style-type: none"> <li>• Initial commission is recognised as day 1 profit</li> <li>• Increase own funds</li> </ul>	<ul style="list-style-type: none"> <li>• Efficient</li> </ul>	<ul style="list-style-type: none"> <li>• Only beyond contract boundaries</li> <li>• Liability may be recognized depending on the nature of the contract</li> </ul>	<ul style="list-style-type: none"> <li>• Relatively complex</li> <li>• No implementation under Solvency 2 so far</li> </ul>

## Example of a QS under Solvency 1

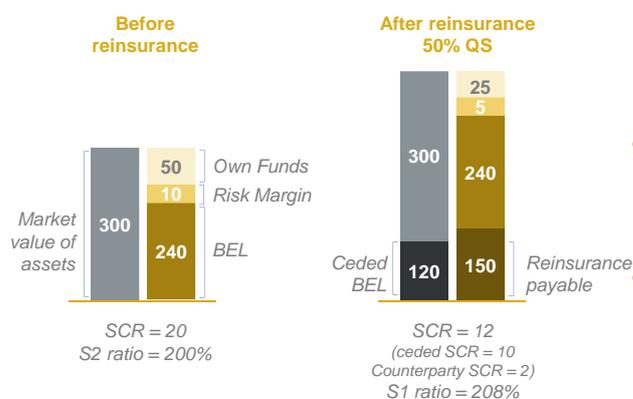
### Example of a 50% QS under Solvency 1



- Recognition of reinsurance is limited
- The attributes of the counterparty do not impact the benefit of reinsurance on the balance sheet or capital position as there is no defined counterparty default risk

## Example of a QS under Solvency 2

### Example of a 50% QS under Solvency 2



- Calculation of the benefit of reinsurance under Solvency 2 is more complex, but there are no arbitrary restrictions
- Reinsurance replaces part of the technical SCR by a counterparty risk SCR
- The same risk can attract a different capital charge in the insurer and reinsurer due to different diversification impacts

## Capital calculations under Solvency 1 vs Solvency 2

	Solvency 1	Solvency 2
Limits	<ul style="list-style-type: none"> <li>S1 restriction on credit taken</li> </ul>	<ul style="list-style-type: none"> <li>No limit</li> </ul>
Impact of the reinsurer's rating	<ul style="list-style-type: none"> <li>No impact</li> </ul>	<ul style="list-style-type: none"> <li>Impact on the amount of counterparty risk capital</li> </ul>
Counterparty risk capital	<ul style="list-style-type: none"> <li>No</li> </ul>	<ul style="list-style-type: none"> <li>Calculation based on LGD</li> <li>Increases with the duration of the reinsurance contract</li> <li>Importance of collateral</li> </ul>

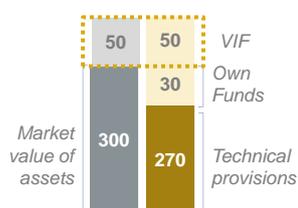
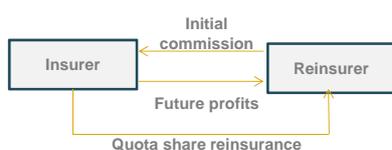


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## VIF monetisation under Solvency 1



Accessing the value of future profits:

- A portion of the relevant business is fixed by the insurer
- The reinsurer pays an initial commission based on the value of the business
- The insurer pays the reinsurer the profits of the reinsured portfolio as they emerge



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## VIF monetisation under Solvency 2

Accessing the value of future profits within contract boundaries:

- VIF is already recognised on the Solvency 2 balance sheet
- Liability to repay recognised either under IFRS or possibly as part of the reinsurance recoverable
- VIF monetisation crystallises the future value of the business and provides liquidity

Accessing the value of future profits beyond contract boundaries:

- Recognise additional value on the balance sheet through increasing own funds



## Internal reinsurer

Accessing diversification

## Introduction

### **Objective – achieving diversification at group centre:**

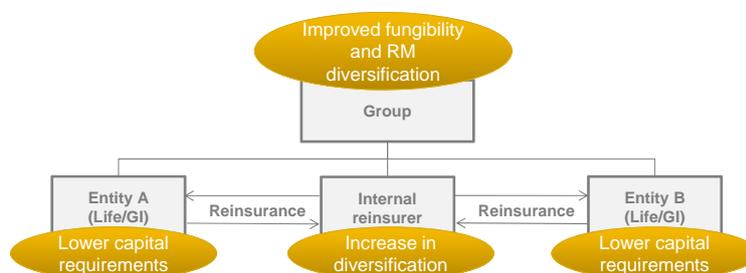
Solvency II and economic capital frameworks reward diversification between risks, and a central reinsurance mixer entity is being seen as a practical way to significantly increase the diversification realised in entities across the Group and ensure that more capital is fungible at Group level.

## Benefits

### **The aim is to establish a reinsurer that takes the risks of multiple insurance entities to:**

- Materialise diversification benefits at the mixer entity level
- Reduce capital requirement at the operating entity level
- Demonstrate the fungibility of capital for Solvency II and increase capital and cash allocation flexibility
- Allow central management of reinsurance and assets
- Allow pricing to be based on diversified group requirements

## How does it work?



Entity level required capital before reinsurance:

CA

0

CB

Entity level required capital after reinsurance:

CA'

CM

CB'

Due to diversification:  $CA' + CB' + CM < CA + CB$



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## Why use reinsurance?

Approaches	Key advantages	Key potential challenges and issues
Reinsurance	<ul style="list-style-type: none"> <li>Reinsurance can be established relatively quickly (and unwound in future if required).</li> <li>Well understood and anticipated within both existing and proposed rules.</li> <li>Focus can be on either broad reinsurance, or specific risks.</li> <li>Able to combine risks from across territories</li> </ul>	<ul style="list-style-type: none"> <li>Requires the establishment, or extension, of a reinsurance entity.</li> <li>Requires reinsurance accounting and administration processes.</li> </ul>
Part VII transfers	<ul style="list-style-type: none"> <li>Brings underlying contracts together, and hence their risks, without introducing counterparty exposures.</li> </ul>	<ul style="list-style-type: none"> <li>Time consuming, costly and not easily unwound (court process required in UK).</li> <li>Potentially difficult (or even impossible) across borders</li> <li>Unable to bring life and non-life risks together.</li> </ul>



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## Why use reinsurance? (c'td)

Approaches	Key advantages	Key potential challenges and issues
Branches	<ul style="list-style-type: none"> <li>Brings underlying contracts together on one balance sheet.</li> <li>Able to work across borders</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to set up for life business as it is necessary to transfer the existing book to have immediate benefit.</li> <li>Difficult to unwind or reconfigure if circumstances change.</li> </ul>
Derivatives, external loans or contingent capital	<ul style="list-style-type: none"> <li>Relatively straightforward to implement.</li> <li>Provides capital in borrowing entity.</li> </ul>	<ul style="list-style-type: none"> <li>Does not necessarily transfer all of the market risk and insurance risk, and often only adverse experience. May need to be monitored / rebalanced.</li> <li>More uncertainty and complexity on treatment and the UK regulator has expressed concern with these approaches.</li> </ul>



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## Implementation

Although the principle is very simple, a number of considerations need to be taken into account to implement this type of structure

### 1. Reinsurance structure

- What risks are reinsured and how?
- Mitigation and minimisation of new risks
- Ensuring liquidity requirements managed

### 2. Regulatory fit

- Ensuring works in current regime
- Ensuring benefit is demonstrated under S2/Economic Capital

### 3. Operational aspects

- Leveraging current operational processes
- Incorporating into all accounting/reporting
- Ensuring ALM appropriate

### 4. Impact on metrics

- Understanding impact on cash, EV and profit
- Structure to ensure problems are mitigated

### 5. Governance

- Creation of framework to meet entity governance requirements
- Impact on BU management incentives

### 6. Taxation

- Ensure transfer pricing appropriate
- Minimise potential additional tax (e.g. I-E business)
- Consider optimal reinsurer location



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## What is public

- **AXA – Investor day November 20 2014**

*Central Risk Carrier: pool Life & Savings reserves through internal reinsurance for European entities. Pilots: France, UK, Belgium*

- **Aviva**

**2014 Annual report:** *In 2014, the Group established Aviva International Insurance Limited (AIL) as its primary on-shore internal reinsurance mixing vehicle with the conclusion of 10% and 5% quota share internal reinsurance treaties covering the Group's UK annuity and general insurance businesses respectively. The Group has plans to significantly increase the amount of business ceded to AIL. The objective of these plans is to promote capital efficiency and realise the benefits of group diversification of risk through lower solo capital requirements in the ceding entities.*

**All returns:** *On 1 January 2016 the Company entered into new reinsurance arrangements with both UKA and AIL, whereby it increased its level of reinsurance of UKA's liabilities from 10% to 25%, and its reinsurance of AIL's liabilities from 5% to 50%.*



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# Questions

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