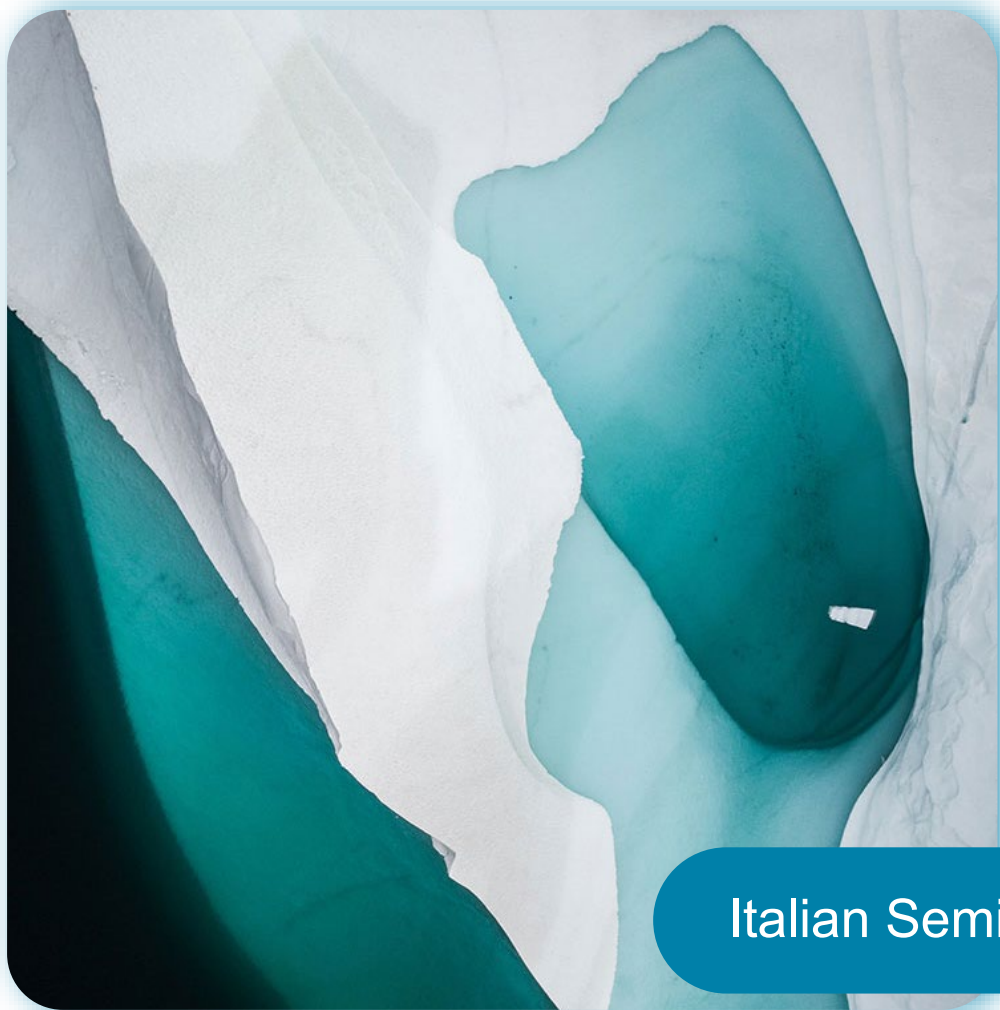


An aerial photograph of a speedboat moving across dark, choppy water. The boat is positioned in the upper right quadrant, leaving a wide, white, turbulent wake that curves and spreads out behind it. The overall scene is high-contrast, with the bright white foam of the wake standing out against the dark, textured surface of the water.

**SCOR**

The Art & Science of Risk



Italian Seminar

# Reinsurance under Solvency II

Presentation by:  
P&C Alternative Solutions  
L&H Financial Solutions

June 2022

# Table of content

## Reinsurance under Solvency II

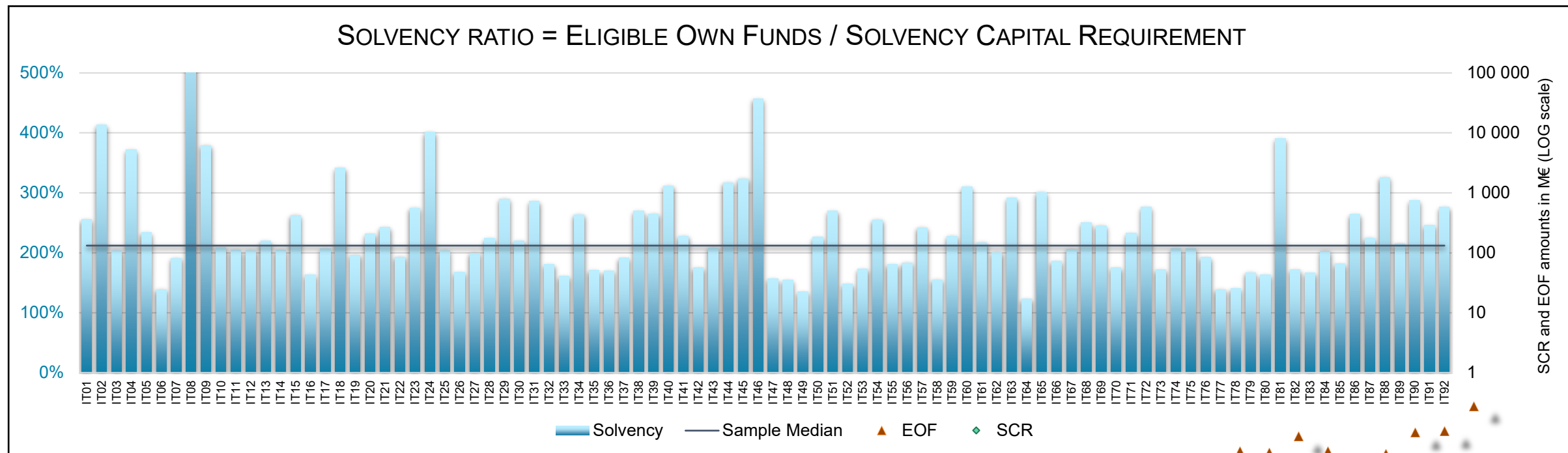
**01** Introduction to Capital Management

**02** Non-life reinsurance: Case studies

**03** Life Financial Solutions

# Solvency overview of the Italian market

## Italy - 2021 Solvency figures



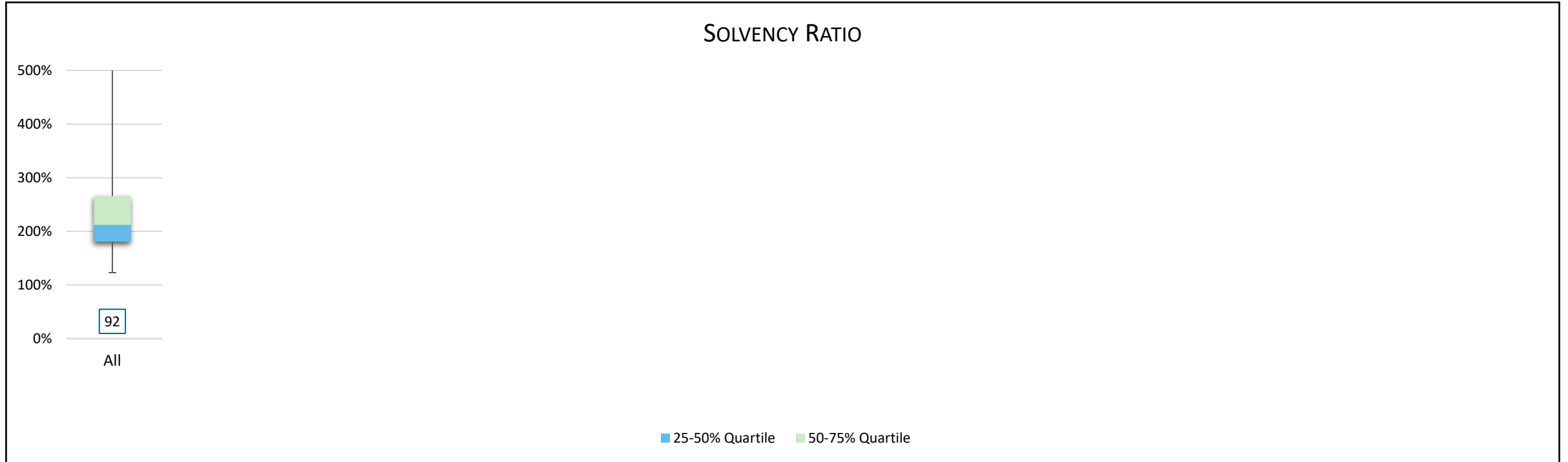
**92** Italian companies considered  
Based on available data (SFCR)

**212%** Median solvency ratio  
Between 123% to 731%

The Italian market

# All roads lead to a 210% solvency ratio

## Italy - 2021 Solvency figures



# 235%

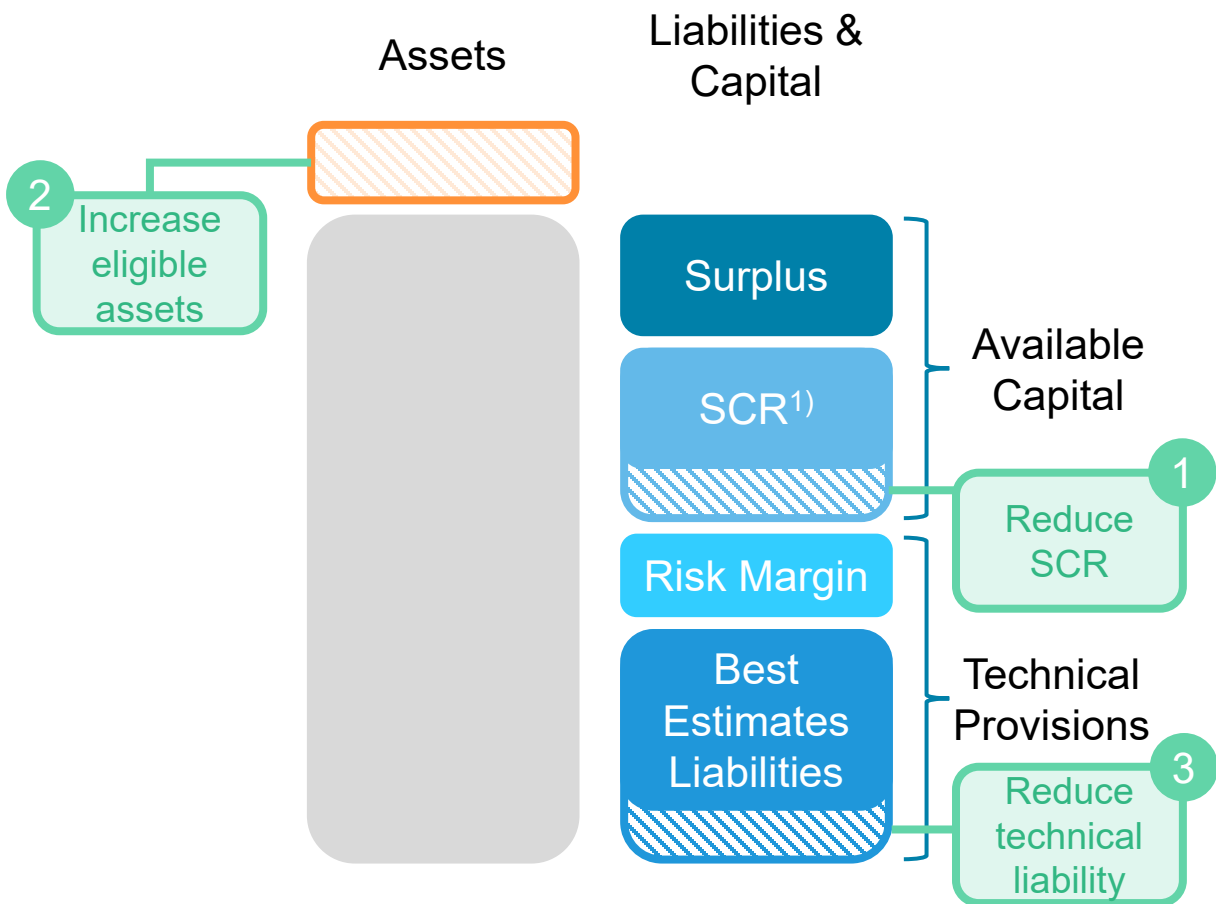
Average solvency ratio  
Between 123% to 731%

# 212%

Median solvency ratio  
First quartile 181%, Third quartile 266%

# Capital management tools

## Achieving the solvency target



### 1 Reduce Solvency Capital Requirements

**Solutions aiming to:**

- Release SCR (premiums, reserves, exposure)
- Improve diversification
- Optimize redundancies and conservatism

**Often applied to:**

- Capital intensive blocks, long tail business
- Limited diversification benefit
- Mis-regulated lines of business (LoB), specific risk

### 2 Increase eligible assets

**Solutions aiming to:**

- Transform inadmissible / intangible assets for recognition
- Provide capital
- Provide liquidity

**Often applied to:**

- Future profits outside contract boundary
- Other intangibles
- Other fungibility restrictions
- Business with high up-front acquisition cost non-deferrable

### 3 Reduce technical liability

**Solutions aiming to:**

- Optimize reserves redundancies and conservatism

**Often applied to:**

- Long-tail business with stringent reserving rules
- Limited mutualization / available data

### 4 Manage volatility of Solvency Ratio

**Solutions aiming to:**

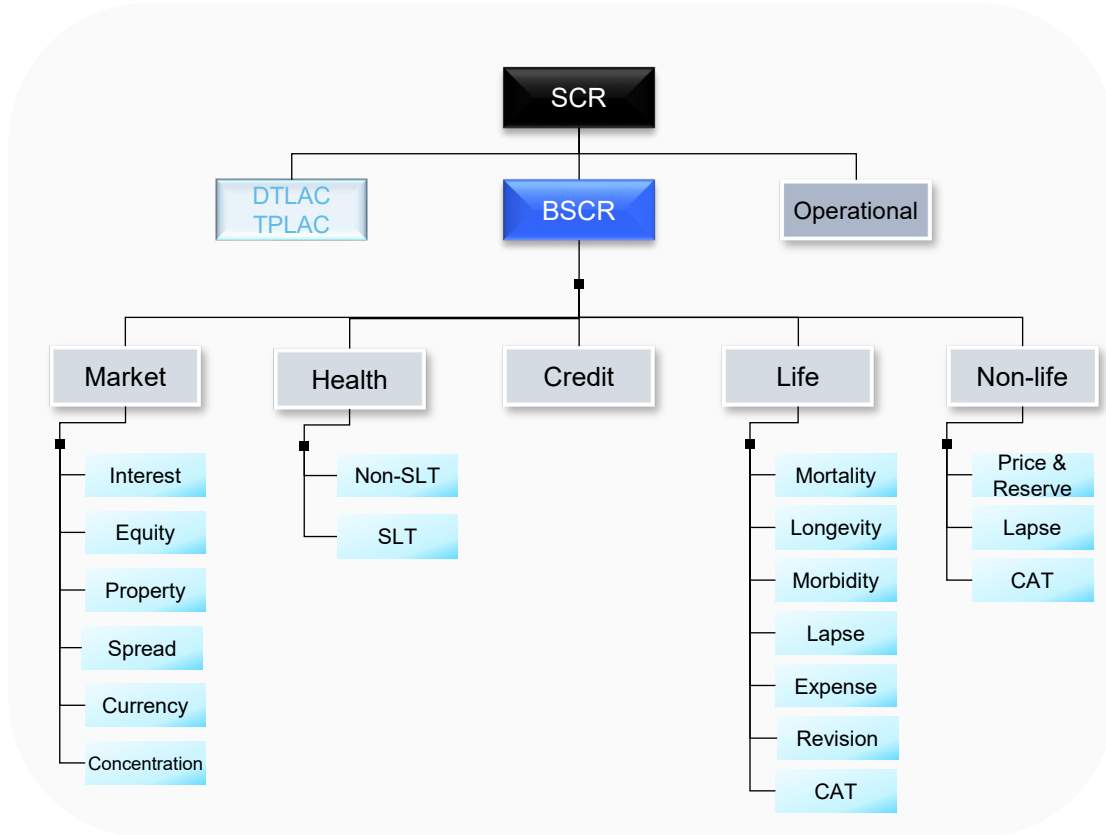
- Provide flexibility to monitor solvency ratio
- Provide a capital management action tool

**Often applied to:**

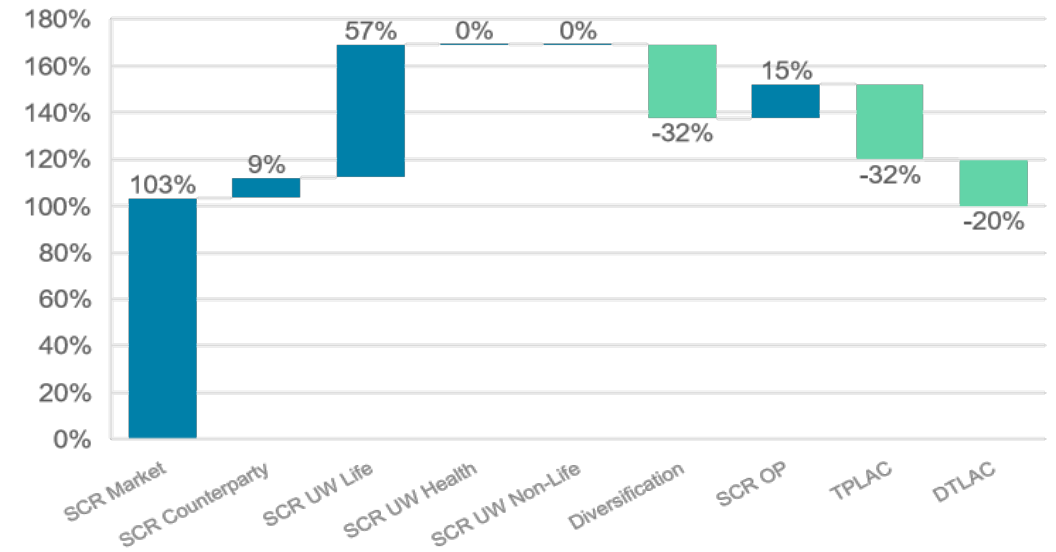
- Solvency ratio sensitive to volatility

The Solvency II standard formula

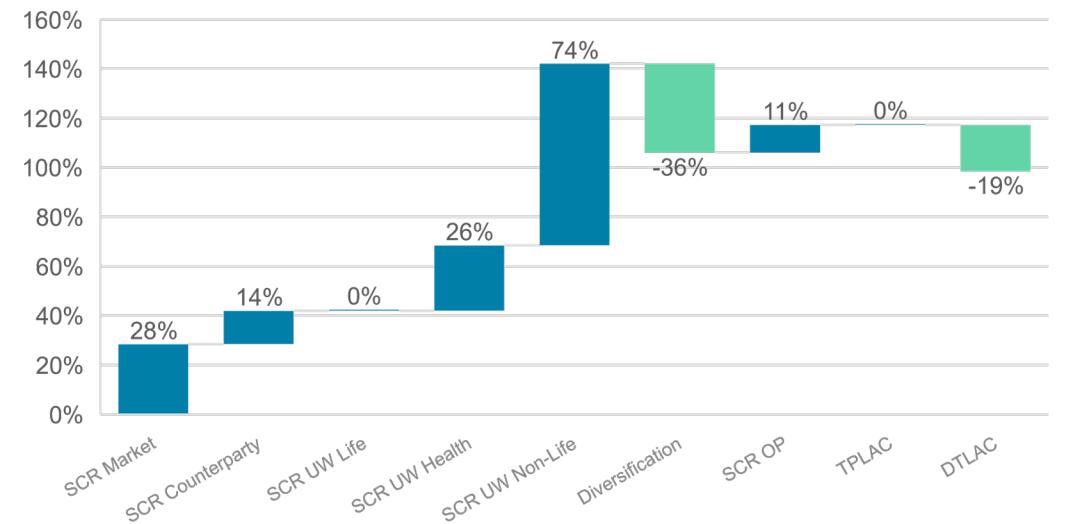
# Main components of the SCR Italy - 2021 Solvency figures



SOLVENCY CAPITAL REQUIREMENT - LIFE



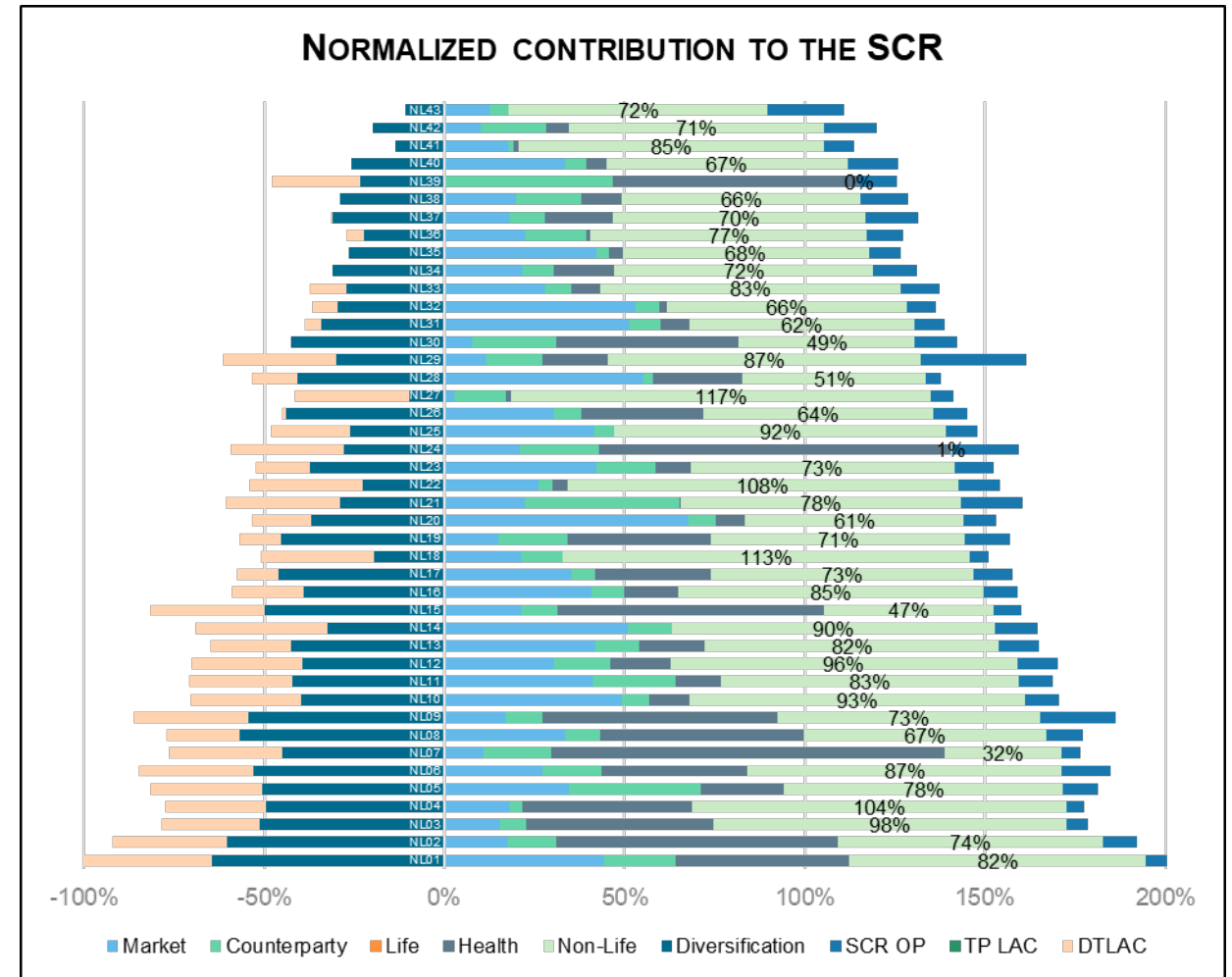
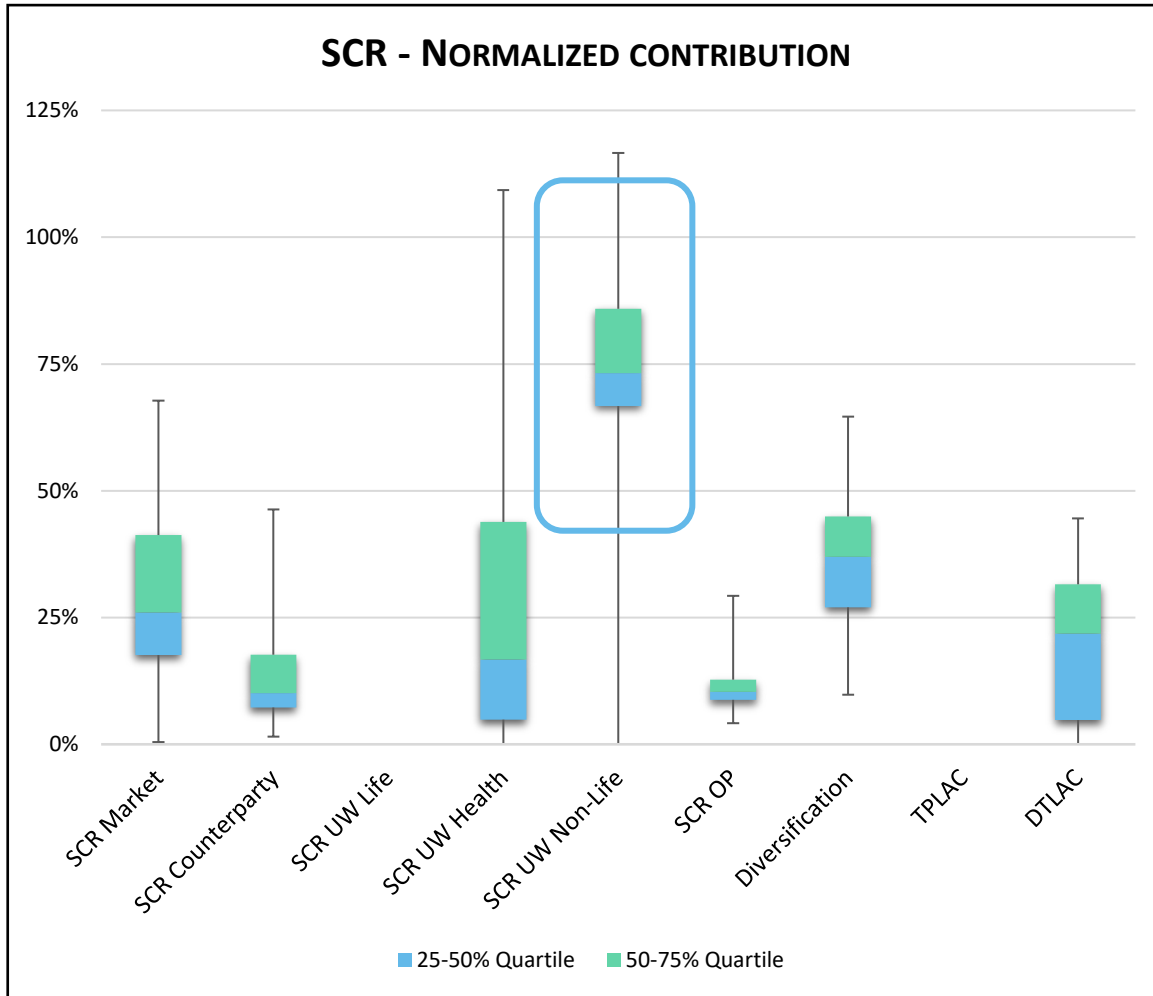
SOLVENCY CAPITAL REQUIREMENT - NON-LIFE



The Solvency II standard formula

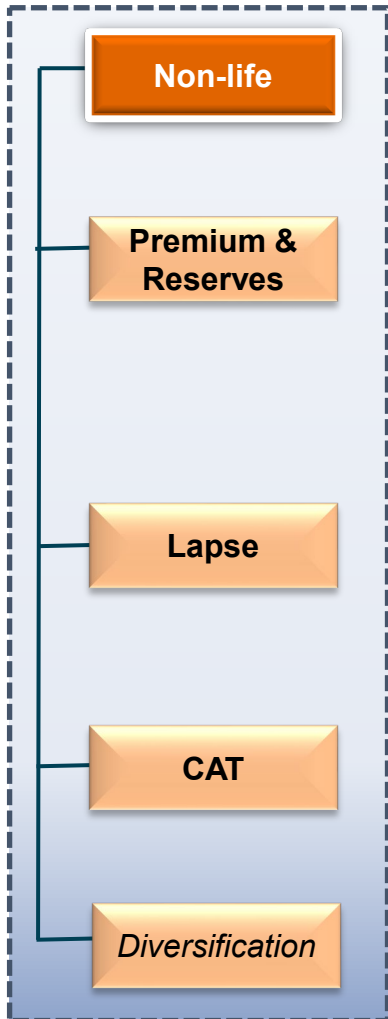
# Non-life underwriting risk weights ~ 74% of the SCR

## Italy - 2021 Solvency figures – NL companies, standard formula reporting





# Understanding the Non-life underwriting risk



- ❑ **Premium or pricing risk** refers to fluctuations in the frequency and severity of insured events  $\approx$  risk associated with future years, for attritional claims
- ❑ **Reserve or reserving risk** refers to fluctuations in the amount of claims settlements  $\approx$  risk associated with past years

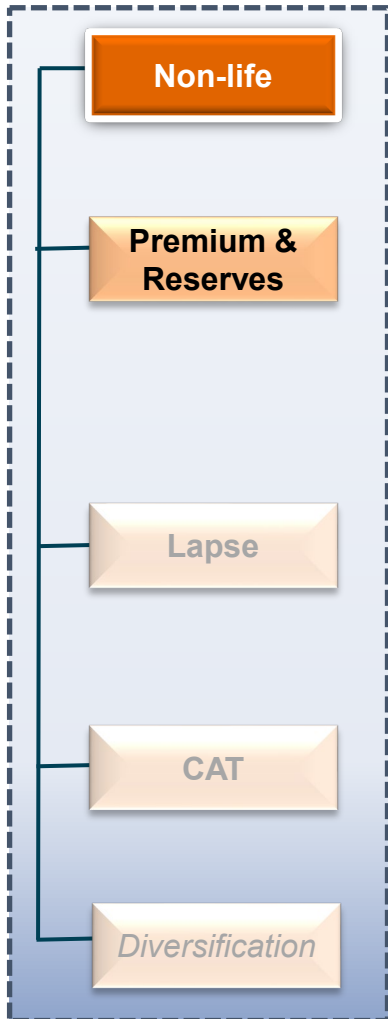
- ❑ **Lapse risk** refers to the uncertainty on the future underwriting profits recognized in the economic balance sheet within the premium provisions (both on the existing unearned business and on anticipated future premium)

- ❑ **Cat risk** refers to uncertain events with low frequency and high severity, differentiated between **natural** catastrophes (e.g. windstorm, flood,...) and **man-made** catastrophes (e.g. explosion to industrial plants, planes crashing,...)  $\approx$  add-on to premium risk for large claims

- ❑ **Diversification** benefit is recognized between these risks

# Understanding the Non-life underwriting risk

Ceding risk-volumes to a reinsurer reduces proportionally the capital requirement



Factor-based approach:  
 required capital = regulatory coefficient × volume  
 - diversification between Price and Reserve risks  
 - diversification between LoBs

←  
←  
Several layers of diversification

$$SCR_{NL \text{ Premium and reserves}} = 3 \cdot \sigma \cdot V$$

Volatility factor\*

Volume

SEGMENTATION OF NON-LIFE INSURANCE AND REINSURANCE OBLIGATIONS AND STANDARD DEVIATIONS FOR THE NON-LIFE PREMIUM AND RESERVE RISK SUB-MODULE

	Segment	Lines of business, as set out in Annex I, that the segment consists of	Standard deviation for gross premium risk of the segment	Standard deviation for reserve risk of the segment
1	Motor vehicle liability insurance and proportional reinsurance	4 and 16	10 %	9 %
2	Other motor insurance and proportional reinsurance	5 and 17	8 %	8 %
3	Marine, aviation and transport insurance and proportional reinsurance	6 and 18	15 %	11 %
4	Fire and other damage to property insurance and proportional reinsurance	7 and 19	8 %	10 %
5	General liability insurance and proportional reinsurance	8 and 20	14 %	11 %
6	Credit and suretyship insurance and proportional reinsurance	9 and 21	19 %	17,2 %
7	Legal expenses insurance and proportional reinsurance	10 and 22	8,3 %	5,5 %
8	Assistance and its proportional reinsurance	11 and 23	6,4 %	22 %
9	Miscellaneous financial loss insurance and proportional reinsurance	12 and 24	13 %	20 %
10	Non-proportional casualty reinsurance	26	17 %	20 %
11	Non-proportional marine, aviation and transport reinsurance	27	17 %	20 %
12	Non-proportional property reinsurance	28	17 %	20 %

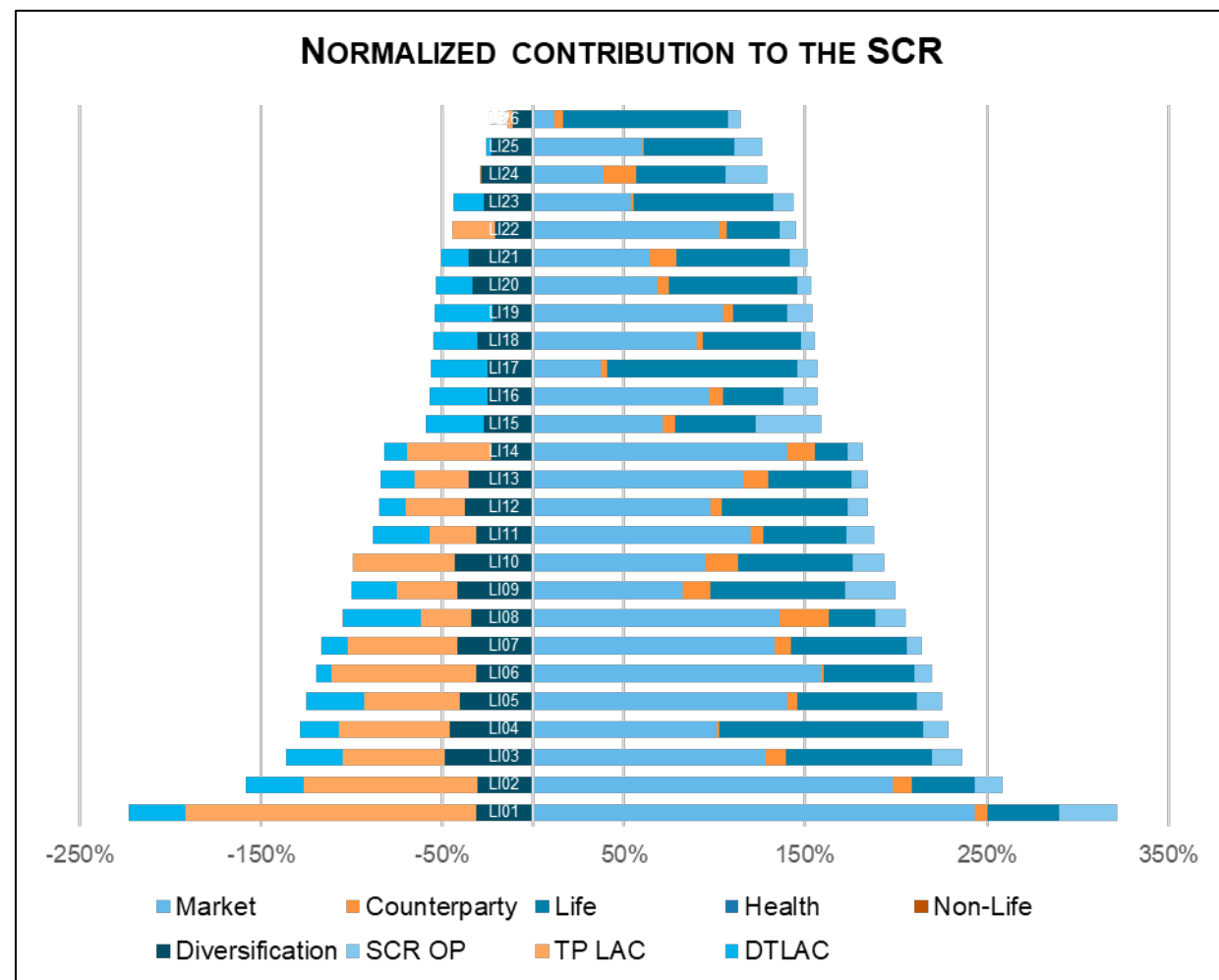
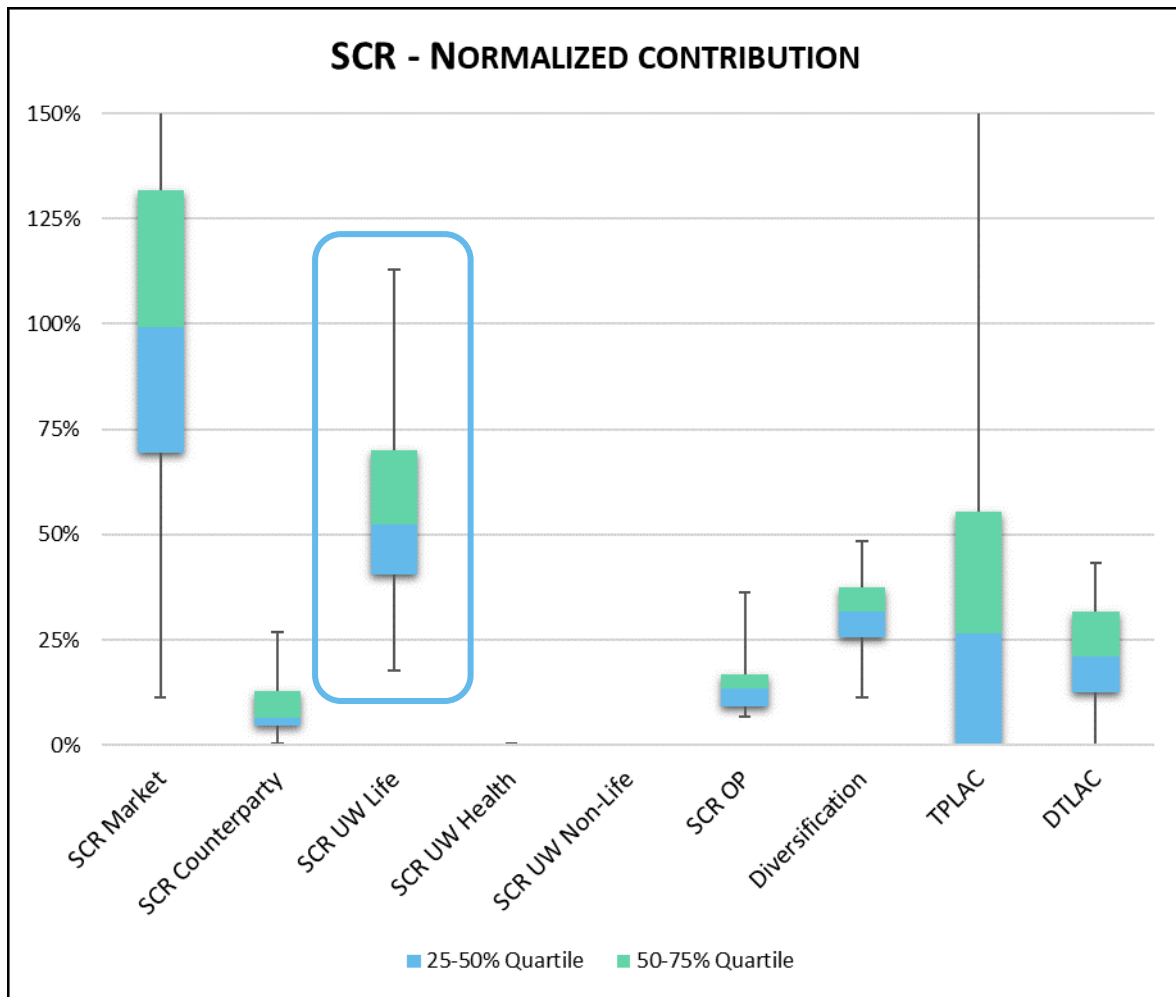
- For reserving risk, V = best estimate of claims
  - at the calculation date
  - net of reinsurance cession
- For pricing risk, V = net premium
  - maximum between the expiring year and the coming year
  - Earned + to be earned within the contract boundary
  - net of reinsurance cession
  - Includes future business

- Volatility factor can be calculated by companies via an authorized USP
- a “NP-reinsurance factor” can also be applied

The Solvency II standard formula

# Life underwriting risk weights ~ 57% of the SCR

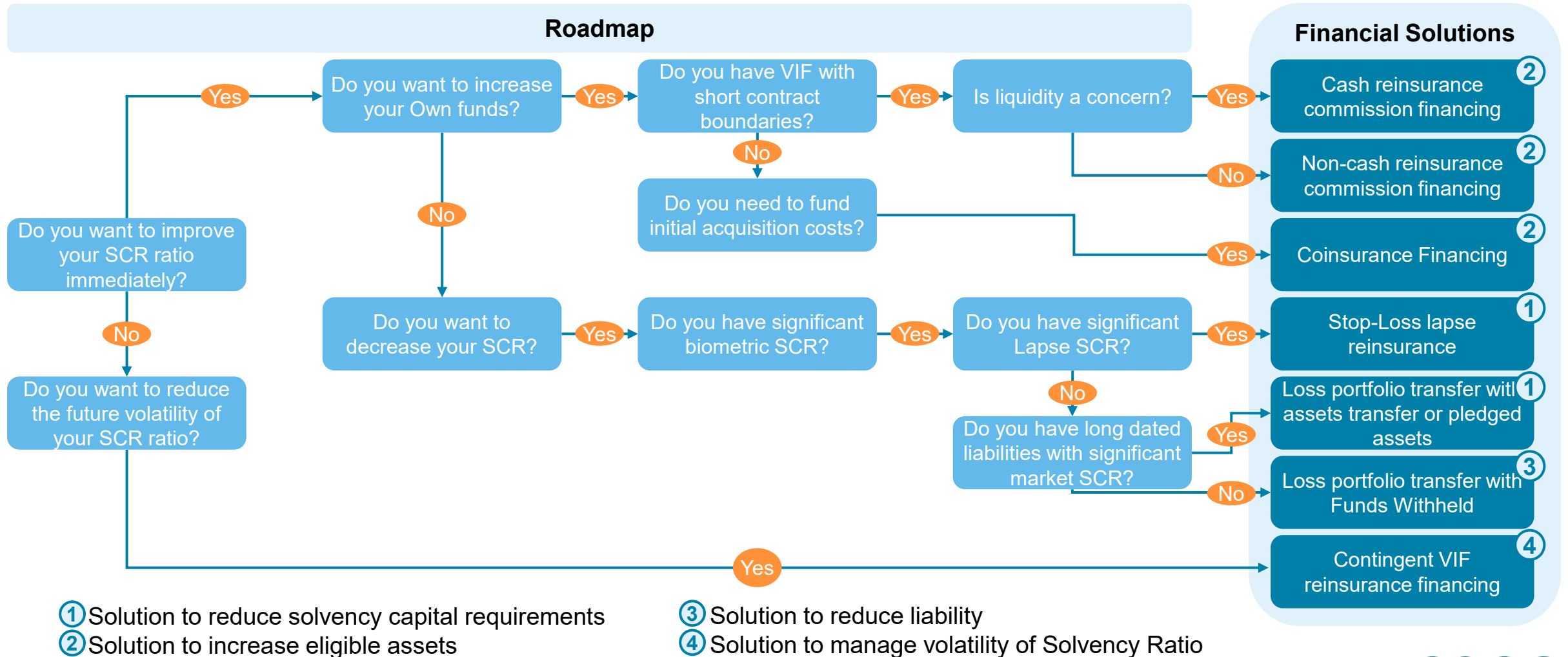
## Italy - 2021 Solvency figures – Life companies, standard formula reporting



# 01 How to define the cedent needs?

## Roadmap to Life Financial Solutions Reinsurance structures

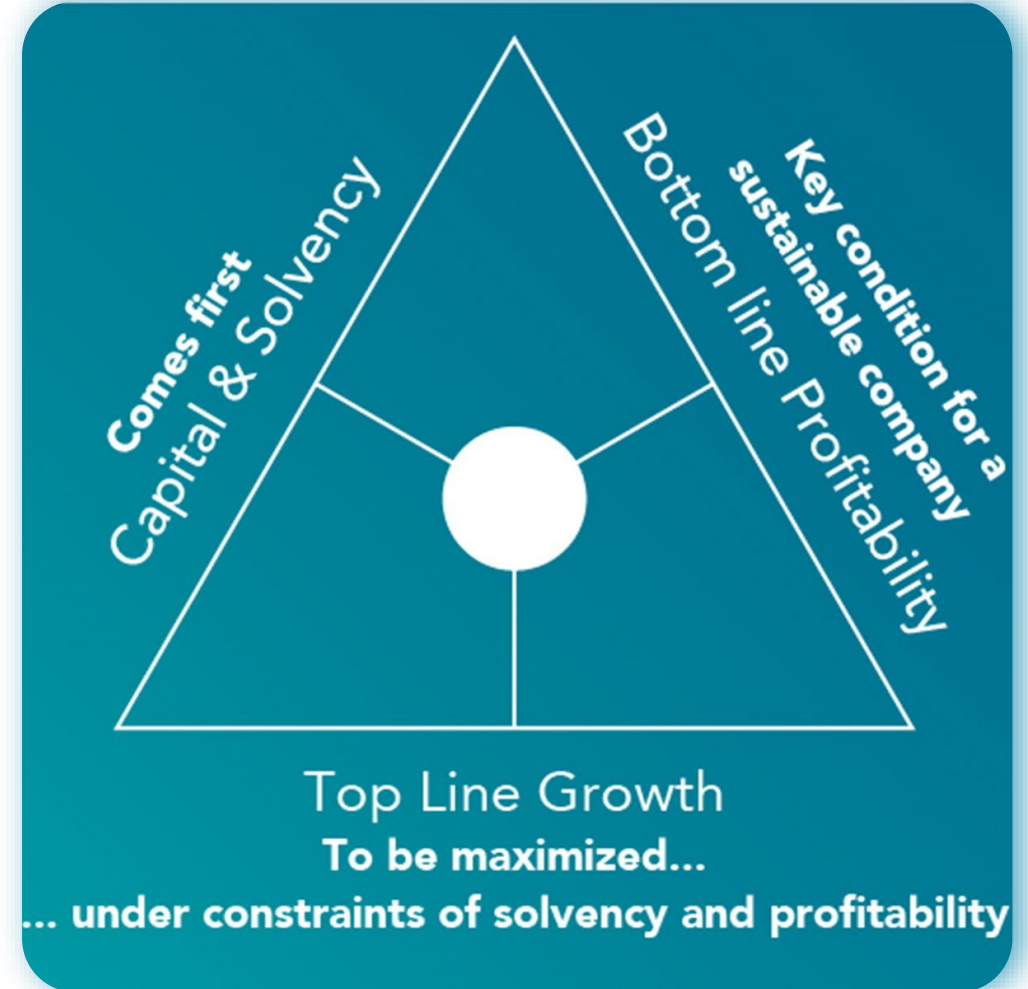
### Capital management tools for different needs



# Managing an insurance company is a fine balancing act

## Reinsurance is a strategic capital management tool

- Insurance companies are looking to optimize their capital, which stands at the confluence of seemingly conflicting objectives: **Solvency, Growth, Profitability**.
- Solvency comes first !
- To maintain or restore solvency ratio while reallocating trapped capital to business growth or dividend payment, reinsurance can help.
- The main difference with traditional reinsurance is the motivation. With traditional reinsurance, the main motivation is the transfer of risk/risk management with the effect on the company's financial statements being secondary. It's the other way round with capital motivated reinsurance, this stands out as a powerful capital management tool, almost always tailor-made



# Table of content

## Reinsurance under Solvency II

**01** Introduction to Capital Management

**02** **Non-life reinsurance: Case studies**

**03** Life Financial Solutions

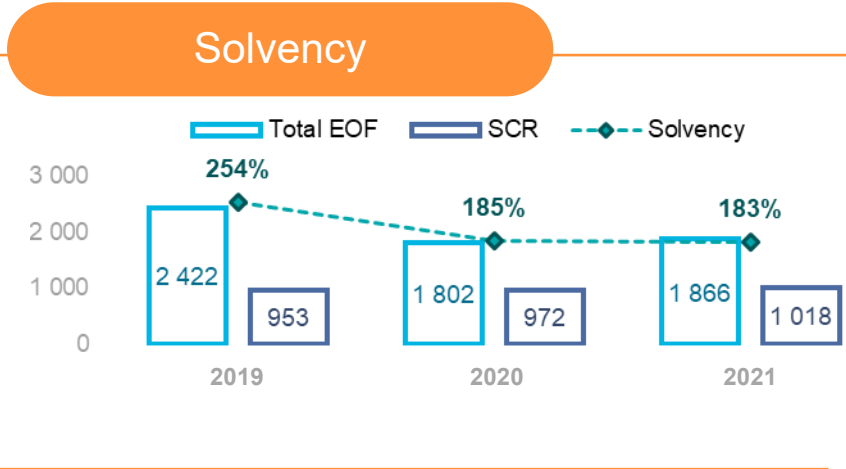
# 02 Non-life reinsurance for capital management

## Case study: ABC Insurance

### Presentation of the case



CASE STUDY



### Solvency impacted by own funds reduction

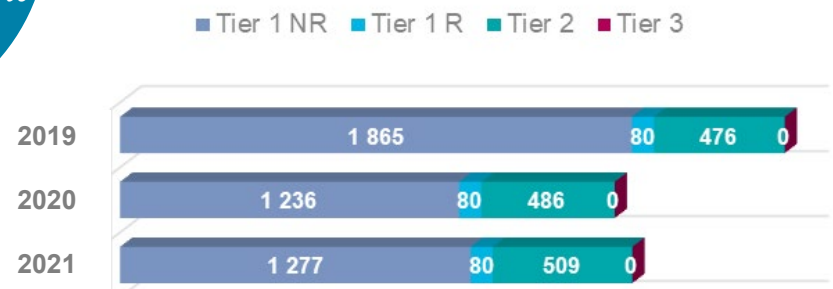
- ABC Insurance is a French General Insurance company
- They have suffered some losses in 2020 and currently face the aftermaths of COVID-19 crises
- They want to take some actions to improve their solvency

$$\text{Solvency} = \frac{\text{Eligible Own Funds}}{\text{Capital Requirement}}$$

### Decrease in the Capital requirement

- Because they debt ratio is already at a high level, issuing more subordinated debt is not an option
- They consider either increasing capital (increasing Own Funds) or entering into reinsurance (reduction of the Capital Requirement)

### Own Funds



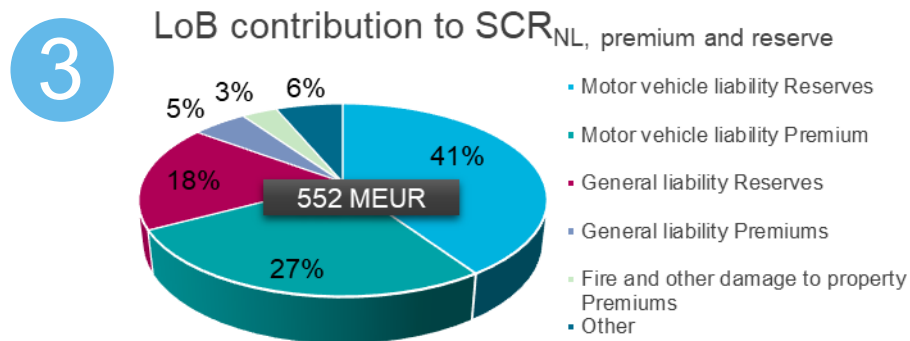
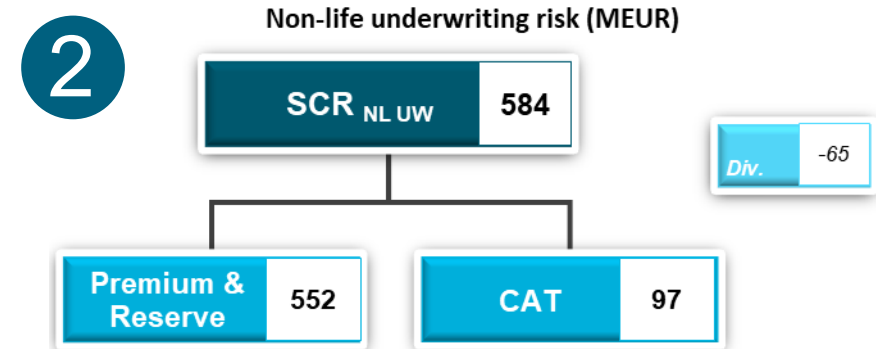
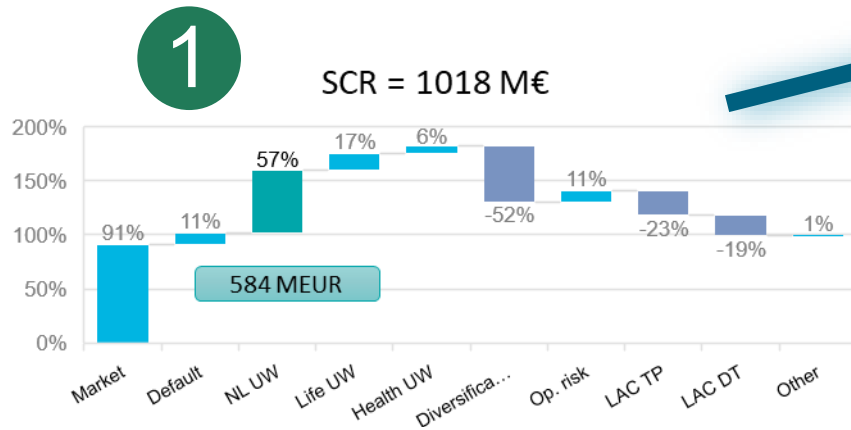
Tier 1 NR = equity shares + result  
 Tier 1 R + Tier 2 = Subordinated debt

# 02 Non-life reinsurance for capital management

## Case study: ABC Insurance

The main components of the SCR are the MTPL reserves and premiums risks

CASE STUDY



Euler's view of capital allocation based on standard formula's assumptions



# 02

Non-life reinsurance for capital management

## Case study: ABC Insurance

### The reinsurance solution: Cession of MTPL volumes

CASE STUDY

SCR<sub>NL</sub>, premium and reserve after reinsurance

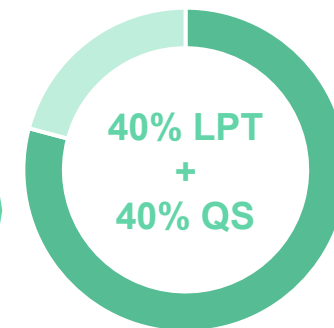
MTPL premium cession rate

MTPL reserve cession rate	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
0%	552	537	523	509	496	484	471	460	449	439	430
10%	530	515	501	487	473	460	448	436	426	416	407
20%	508	493	478	464	451	438	425	413	402	392	383
30%	487	472	457	442	429	415	403	391	380	370	361
40%	466	451	436	421	407	394	381	369	357	347	339
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60%	428	412	396	381	367	352	339	326	315	305	296
70%	410	394	378	363	348	334	320	307	295	285	276
80%	394	378	362	346	331	316	302	289	277	266	258
90%	380	363	347	332	316	301	287	273	260	249	240
100%	367	351	335	319	304	289	275	261	248	236	225

Estimations based on standard formula hypothesis

MEUR	2021	After RI	Difference
Market Risk	927	927	
Counterparty default risk	107	107	
Health underwriting risk	64	64	
Life underwriting risk	169	169	
Non-life underwriting risk	584	442	-142
Non-life premium & reserve risk	552	407	-145
Non-life CAT risk	97	97	
Non-life lapse risk	0	0	
Non-life diversification	-65	-63	
Diversification	-527	-473	
Intangible asset Risk	0	0	
<b>Basic SCR</b>	<b>1 324</b>	<b>1 236</b>	<b>-89</b>
Operational risk	109	109	
LAC TP	-231	-231	
LAC DT	-197	-197	
Other	11	11	
<b>SCR</b>	<b>1 018</b>	<b>929</b>	<b>-89</b>
Eligible own funds	1 866	1 866	
<b>Solvency ratio</b>	<b>183%</b>	<b>201%</b>	<b>18</b>

MEUR	2021	After RI	Difference
Market Risk	927	927	
Counterparty default risk	107	107	
Health underwriting risk	64	64	
Life underwriting risk	169	169	
Non-life underwriting risk	584	429	-155
Non-life premium & reserve risk	552	394	-158
Non-life CAT risk	97	97	
Non-life lapse risk	0	0	
Non-life diversification	-65	-63	
Diversification	-527	-468	
Intangible asset Risk	0	0	
<b>Basic SCR</b>	<b>1 324</b>	<b>1 228</b>	<b>-96</b>
Operational risk	109	109	
LAC TP	-231	-231	
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Eligible own funds	1 866	1 866	
<b>Solvency ratio</b>	<b>183%</b>	<b>202%</b>	<b>19</b>



would provide relief of **18pts**



would provide relief of **+19 pt**

# 02 Non-life reinsurance for capital management

## Structured quota-share

### Capital relief through premium risk reduction

SCR<sub>NL, premium and reserve</sub> after reinsurance

MTPL premium cession rate

MTPL reserve cession rate	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
0%	552	537	523	509	496	484	471	460	449	439	430
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100%	367	351	335	319	304	289	275	261	248	236	226

Estimations based on standard formula hypothesis, CAMPUS Insurance, 2019

#### Rationale

- Under most risk-based capital regimes, a Quota Share solution reduces efficiently the underwriting risk, allowing a substantial capital relief.
- A traditional Quota Share may not be convenient as the client may cede more profit than what he is keen to.

#### ● A Structured QS cover featuring the following:

- Rolling 2-year term
- Single or multiline
- Coverage of underwriting or accounting years
- Net of inuring XL reinsurance
- Funds withheld basis
- Non-linear ceding commission
- Predefined reinsurer margin
- Annual loss ratio cap above the 99,5% loss ratio

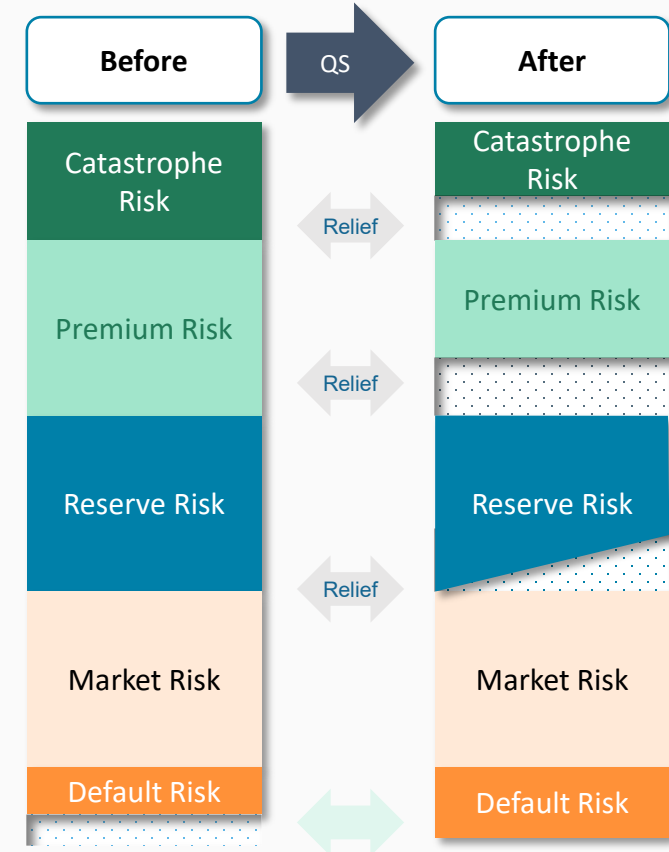
#### Solution



#### Benefit

- Reduced volatility (due to the inuring reinsurance and the multiyear structure) limits the profit ceded to the reinsurer.
- Increased diversification benefit on the reinsurer's balance sheet saves on cost of capital
- The funds withheld feature avoids cash outflows.
- Default risk on a AA-rated reinsurer is limited

#### Capital requirement



# 02 Non-life reinsurance for capital management

## Structured quota-share

### Case study: variable cession rate

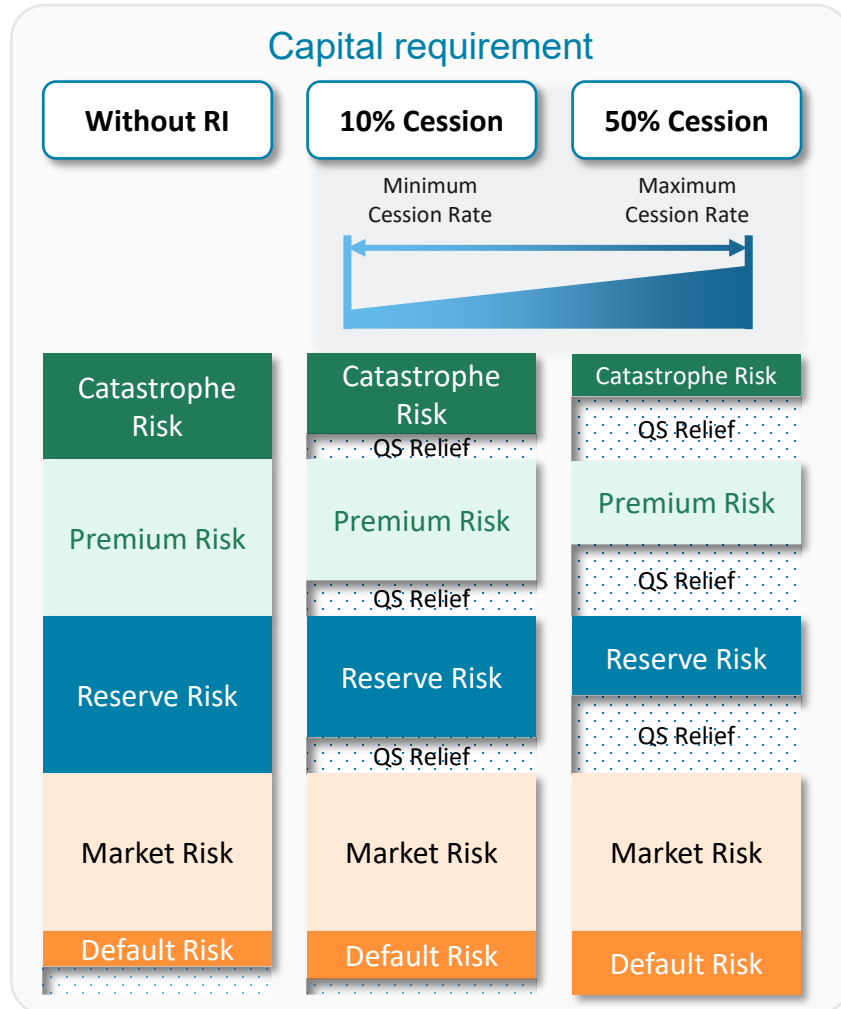
SCR<sub>NL, premium and reserve after reinsurance</sub>

MTPPL premium cession rate

MTPPL reserve cession rate	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
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Estimations based on standard formula hypothesis, CAMPUS Insurance, 2019

CASE STUDY



### Rationale

- Option to cede business to a reinsurer in case of pre-agreed adverse event.
- The cession would reduce the capital requirement hence restore the solvency ratio after the event.

### Solution

- A Quota-Share contract with a variable cession rate.
- Starting with a low cession rate with right, for the reinsured, to increase such cession rate up to [50]% when predefined conditions are met (CAT event, acquisition...).
- The right to increase the cession rate is enforceable after the “event”, as the reinsured doesn’t pay for event protection but for capital relief after the event occurrence.
- A rolling agreement to secure access to the “capacity” over a predefined number of years.

### Benefit

- Secured and immediately accessible capital at a time it would be the most difficult to find resources and pressure from the regulator might become significant.
- Competitive pricing compared to subordinated debt, given the low cession rate when not activated
- The trigger events can be customized to scenarios considered in the “ORSA” Pillar 2 requirements.

# 02 Non-life reinsurance for capital management

## Retrospective reinsurance (LPT)

### Capital relief through reserve risk reduction

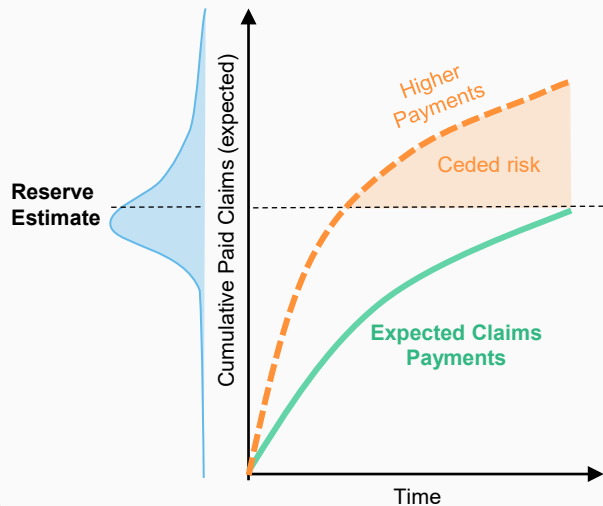
		MTPL premium cession rate										
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	40%	434	419	404	390	377	364	352	340	329	318	308
	50%	401	386	371	357	344	331	319	307	296	285	275
	60%	368	353	338	324	311	298	286	274	263	252	242
	70%	335	320	305	291	278	265	253	241	230	219	209
	80%	302	287	272	258	245	232	220	208	197	186	176
	90%	269	254	239	225	212	199	187	175	164	153	143
	100%	236	221	206	192	179	166	154	142	131	120	110

Estimations based on standard formula hypothesis, CAMPUS Insurance, 2019

#### What is retrospective reinsurance?

Retrospective reinsurance makes the reinsurer liable for payment of outstanding claims related to the past.

Unlike prospective reinsurance that protects against future risks, retrospective reinsurance focuses on claims already incurred but not yet fully settled



#### Rationale

- Reserve risk can contribute significantly to the capital requirement, namely for long tail business such as MTPL / GTPL.
- Retrospective cover transfers this risk to the reinsurer

- A fully funded portion allowing reserve offloading and an immediate capital relief through reserve risk reduction;
- With or without cash transfer
- A cover limit well above the expected loss

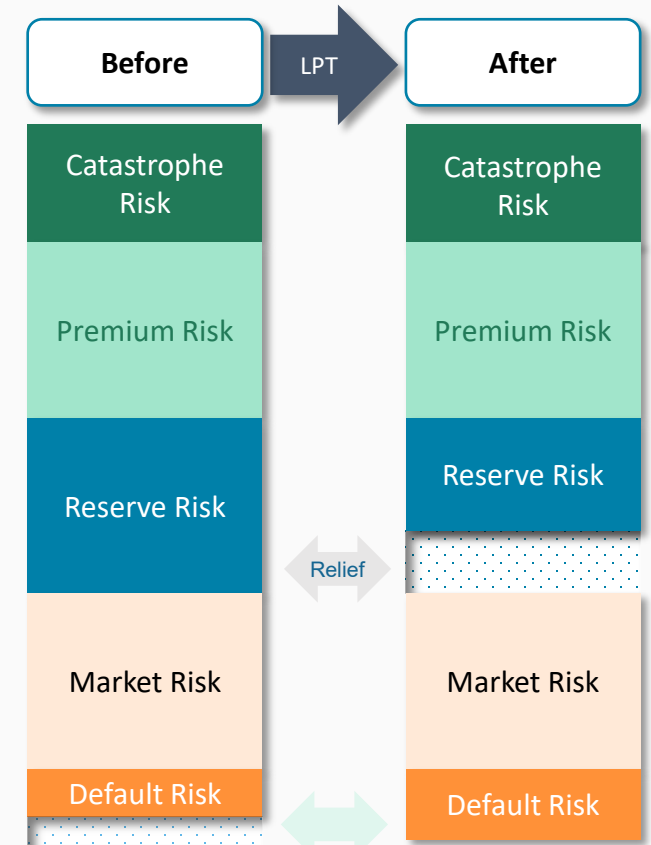
#### Solution



#### Benefit

- P&L and own funds protection from a deviation of the subject book of reserves
- Immediate capital relief, under Solvency II standard formula and most capital regimes / rating models

#### Capital requirement



# 02

Non-life reinsurance for capital management

## Retrospective reinsurance (LPT)

### Case study: Solvency boost for monoline insurance company

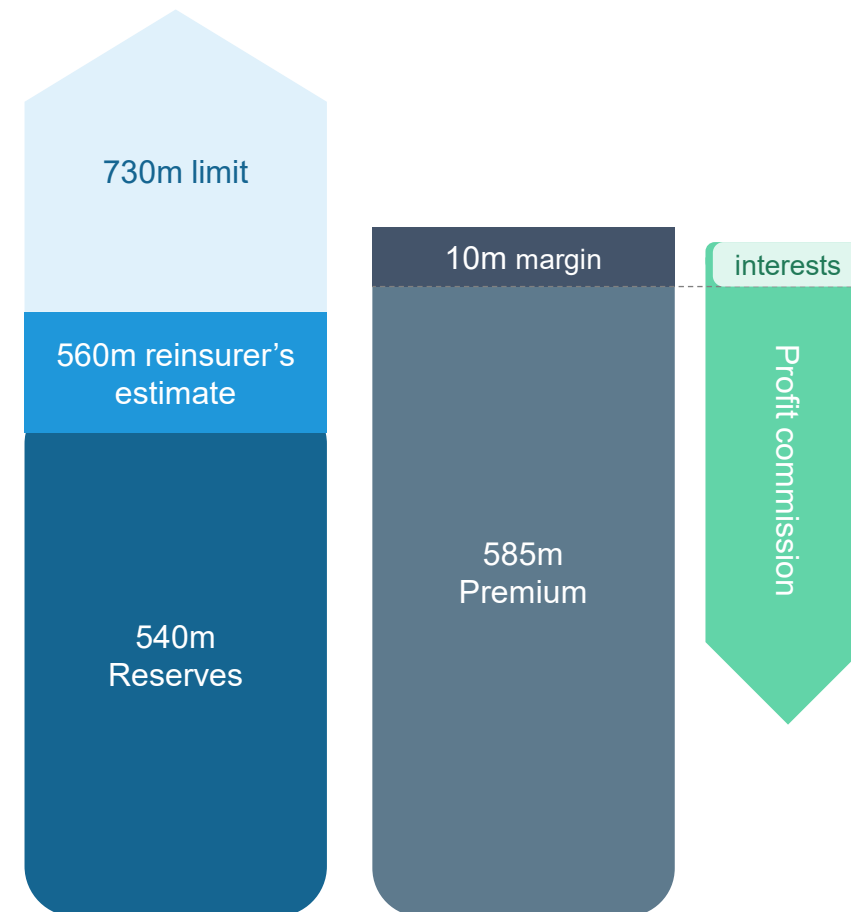
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	100%	367	351	335	319	304	289	275	261	248	236	226

Estimations based on standard formula hypothesis, CAMPUS Insurance, 2019



CASE STUDY

Illustrative example of LPT terms	
<b>Inception</b>	31-12-2021
<b>Covering</b>	Underwriting years 2016 to 2021
<b>Client best estimate</b>	EUR 540m
<b>RI best estimate</b>	EUR 560m
<b>Limit</b>	EUR 730m
<b>Upfront premium</b>	EUR 585m
<b>Funds Withheld account (FWA)</b>	Upfront premium + interest on the FWA - reinsurer's margin - paid and commuted claims
<b>Reinsurer's margin</b>	EUR 10m (part of premium)
<b>Profit commission</b>	100% of the FWA positive balance
<b>Commutation</b>	Allowed as from the 4 <sup>th</sup> anniversary



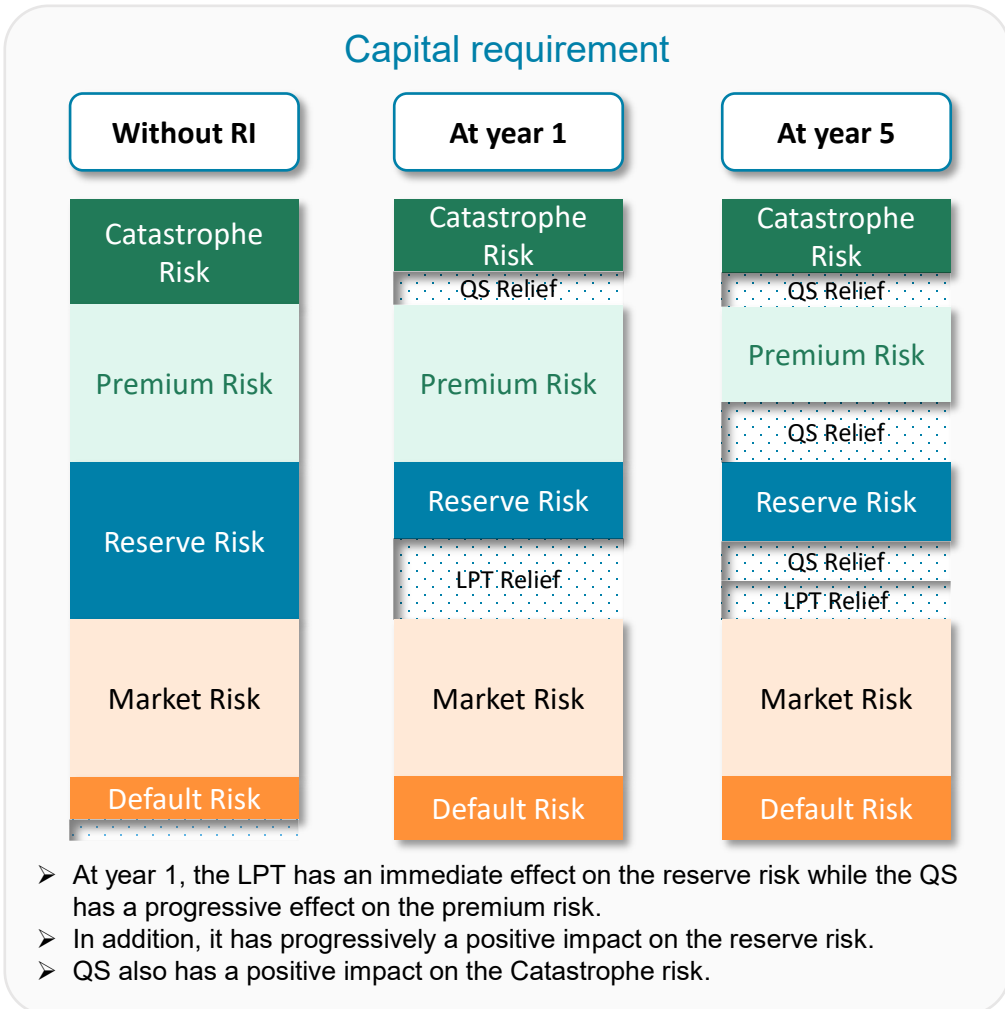
# 02 Non-life reinsurance for capital management

## Structured QS and LPT combination

### Capital relief through premium and reserve risks reduction

		MTPL premium cession rate										
		0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
MTPL reserve cession rate	0%	552	537	523	509	496	484	471	460	449	439	430
	10%	541	516	501	487	474	461	448	436	426	416	407
	20%	530	505	490	476	463	450	437	425	414	404	395
	30%	487	472	457	442	429	415	403	391	380	370	361
	40%	466	451	436	421	407	394	381	369	357	347	339
	50%	447	431	416	401	386	373	359	347	336	326	317
	60%	428	412	396	381	367	352	339	328	315	305	296
	70%	410	394	378	363	348	334	320	307	295	285	276
	80%	394	378	362	346	331	316	302	289	277	266	256
	90%	380	363	347	332	316	301	287	273	260	249	240
	100%	367	351	335	319	304	289	275	261	248	236	226

Estimations based on standard formula hypothesis, CAMPUS Insurance, 2019



### Rationale

- Maintain solvency ratio in a comfort zone
- Reinsurance to be a substitute for new equity or new subordinated debt.
- LPT/ADC solutions provide an immediate solvency relief but are vanishing over time
- QS solutions take time to provide a significant relief and remain subject to renewals

### Solution

- A solution combining a retrospective cover LPT/ADC with a prospective QS.
- With a multiyear commitment to secure the relief for a minimal period of years.

### Benefit

- LPT/ADC section for its immediate effect, and
- Prospective QS section to compensate the vanishing LPT/ADC section.
- At a reduced cost when the sections can compensate each other and when reinsurance program inures to the benefit of the solution.

# 02 Non-life reinsurance for capital management

## Key Takeaways

Solutions designed for each client such as to address their capital needs



**The QS and LPT** remains the most efficient under the standard formula capital model.



**The combined LPT & QS** is the newest trend in Europe.

**Contingent QS** is on the rise for its flexibility.



**Other efficient tools**, more sophisticated, for internal model companies / to address specific situation: stop loss, profit monetization, ...

A range of sophisticated solutions, relying on SCOR highly diversified balance sheet and strong rating, allows insurance companies to make the most of the latest innovations in reinsurance protection.

# Table of content

## Reinsurance under Solvency II

**01** SII Benchmarking

**02** P&C Alternative Solutions

**03** Life Financial Solutions



# 03 Overview of Life Financial Solutions Reinsurance Structures

Uncover which reinsurance solutions would best address an insurer's financial needs by understanding its objectives, constraints and underlying business

Structure	Description	Address the following challenges
<ul style="list-style-type: none"> <li>Up-front reinsurance commission on a coinsurance basis</li> </ul>	<ul style="list-style-type: none"> <li>Reinsurance quota-share with up-front cash/non-cash commission on in-force or new business</li> </ul>	<ul style="list-style-type: none"> <li>High risk capital and risk margin</li> <li>Non-optimal balance between risks</li> <li>Insufficient diversification</li> <li>Non-deferrable acquisition costs</li> </ul>
<ul style="list-style-type: none"> <li>Up-front reinsurance commission with a deficit account / Guaranteed schedule of cash reinsurance commissions</li> </ul>	<ul style="list-style-type: none"> <li>Reinsurance quota-share with either an upfront cash/non-cash commission or a guaranteed schedule of cash commissions on in-force or new business</li> </ul>	<ul style="list-style-type: none"> <li>Contract boundary</li> <li>Optimization of deferred tax asset</li> <li>In-force and New business acquisition financing</li> </ul>
<ul style="list-style-type: none"> <li>Contingent reinsurance financing solutions</li> </ul>	<ul style="list-style-type: none"> <li>Insurer is given the flexibility to choose when to draw the reinsurance commission over a pre-agreed draw down period</li> </ul>	<ul style="list-style-type: none"> <li>Volatile solvency ratio</li> <li>Insurer may need to increase surplus in the future at short notice</li> </ul>
<ul style="list-style-type: none"> <li>Loss Portfolio Transfer on short-term disability (income protection) business / on funeral business</li> </ul>	<ul style="list-style-type: none"> <li>Reinsurance quota-share with an initial reserves transfer</li> <li>Structures: FWH, pledged assets or assets transfer</li> </ul>	<ul style="list-style-type: none"> <li>Underwriting risk capital is too high</li> <li>Market risk capital is too high</li> <li>Reserves are deemed too conservative</li> </ul>
<ul style="list-style-type: none"> <li>Lapse reinsurance (payment on mass lapse or on lapse-up stress)</li> </ul>	<ul style="list-style-type: none"> <li>SCOR covers all losses between the attachment and detachment points</li> </ul>	<ul style="list-style-type: none"> <li>Lapse risk capital and/or risk margin is too high</li> </ul>

# 03

Case Study 1

## VIF Reinsurance financing solutions SCOR's long track record of providing financial solutions

- SCOR has long track record of providing financial solutions in Iberia with very large financial institutions. In 2013-2014, we successfully transacted on large VIF reinsurance financing transactions in Spain with BBVA Seguros, Eurovida and Mediterráneo Vida, which solidified our footprint with bancassurers in Spain.
- In 2015, SCOR formed a team of professionals dedicated to providing financing in the L&H space and capital management solutions under Solvency II.
- At SCOR, there is a strong focus on Research and Development (R&D) to create centers of excellence. SCOR has established dedicated Research & Development Centers each covering each of the key biometric risks SCOR seeks out. Each R&D team is responsible for risks globally. The company's support for research activities and investment in development has led to the creation of expert teams, including a dedicated Policyholder Behaviour R&D function.
- As part of Policyholder Behaviour R&D, SCOR has analysed lapse experience on Credit Linked business in Spain and has also worked on financial solution lapse structures under Solvency II in Europe.

### Full risk transfer



Upfront reinsurance commission on a coinsurance basis

### Remote risk transfer

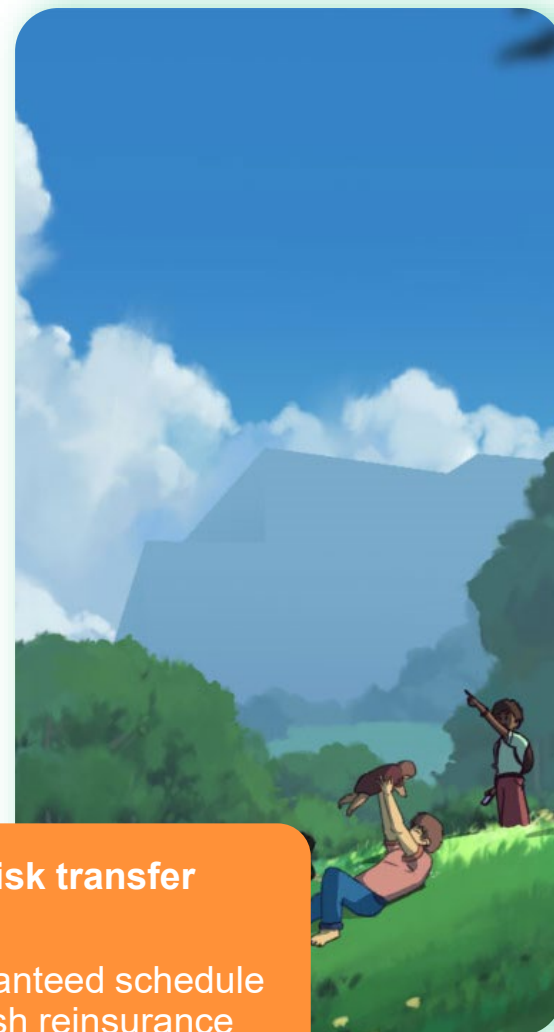


Upfront reinsurance commission on a deficit account basis

### Remote risk transfer



Guaranteed schedule of cash reinsurance commissions



# 03 Case Study 1

## VIF Reinsurance financing solutions

### Key considerations and impacts



**In our discussion with regulators and local tax authorities, the key points to consider in risk transfer solutions are:**

Basis Risk	<p>Potential basis risk may be introduced if the loss payment is not fully aligned with the actual loss of VIF incurred by the cedent. This would be generally the case under the following circumstances:</p> <ul style="list-style-type: none"> <li>• Payment trigger is based on number of policies for an heterogenous block of policies, or the model points use in the loss formula are not sufficiently granular.</li> <li>• Nonlinear payoff structure where the payment is not consistent with actual loss of VIF.</li> <li>• Special exclusion clause in treaties with an understanding that many reinsurers won't accept risks that are outside the control of the cedent such as a change in regulation.</li> </ul>
Risk Transfer	Parties should be able to demonstrate risk transfer such that the attachment level may need to be calibrated at a level before the 1/200 years event.
Alignment of interests	Parties should have strong alignment of interests to ensure the business is managed and monitored in accordance to best practice standards.
Contract Classification	Tax authorities would need to validate that the contract is considered a life rather than a non-life contract.
Counterparty credit risk	For large uncollateralized deals, the regulator would want to ensure there is a good pool of strong rated reinsurers taking the risk.
Offshore reinsurers	Use of non-EU domiciled reinsurers can be subject to heavy scrutiny by the local regulator.

#### What are the benefits/impacts for the cedent?

Long contract boundary	<ul style="list-style-type: none"> <li>• The solution crystalizes future profits as the reinsurer takes the risk of adverse experience of biometric assumptions.</li> <li>• The SCR is reduced.</li> </ul>
Short contract boundary	<ul style="list-style-type: none"> <li>• The solution accelerates and crystalizes future profits.</li> <li>• The own funds are increased as there is no contingent liability.</li> </ul>

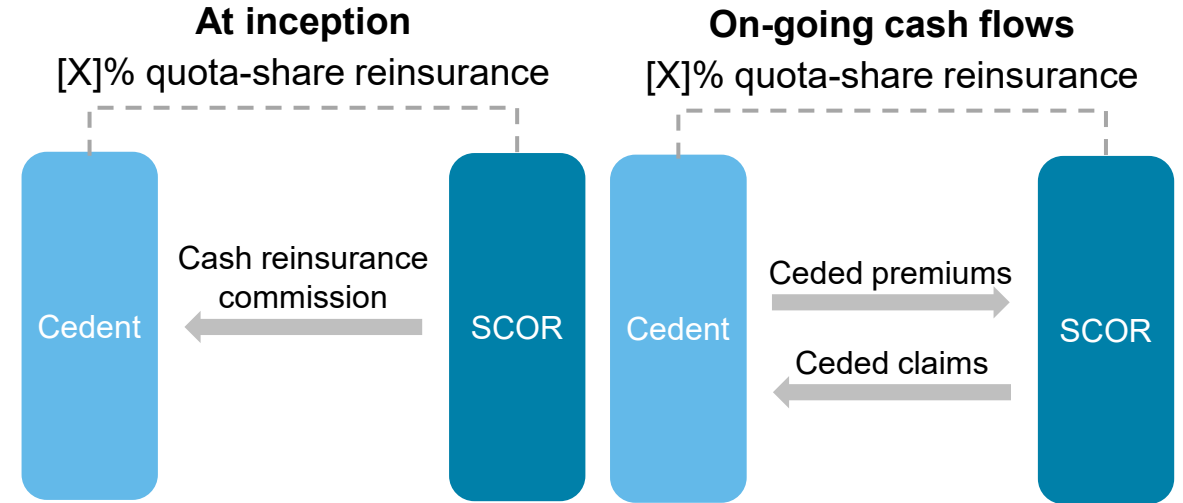
# 03 Case Study 1

## Reinsurance financing solutions: Full risk transfer Up-front cash reinsurance commission on a coinsurance basis

### What is the cover about?

- The solution is a traditional reinsurance quota-share with an upfront cash reinsurance commission. The reinsurance commission usually covers up-front brokers' commissions and other non-deferrable acquisition expenses.
- At inception,
  - The cedent enters into a proportional coinsurance financing arrangement with SCOR on a block of business.
  - SCOR pays an up-front cash reinsurance commission to the cedent. The size of the reinsurance commission depends on the target portfolio. It is usually equivalent to [60-70]% of the present value of future cash flows.
- Over the lifetime of the treaty,
  - Future reinsurance settlements between parties are comprised of premiums less claims paid.
  - The repayment of the reinsurance commission is contingent on the emergence of future risk profits on the reinsured portfolio.
  - SCOR is entitled to receive all cashflows emerging from the portfolio up to its quota-share, and liable for all future claims payable.
  - SCOR holds the future build-up of reserves until the full natural expiration of the policies

### Structure diagram



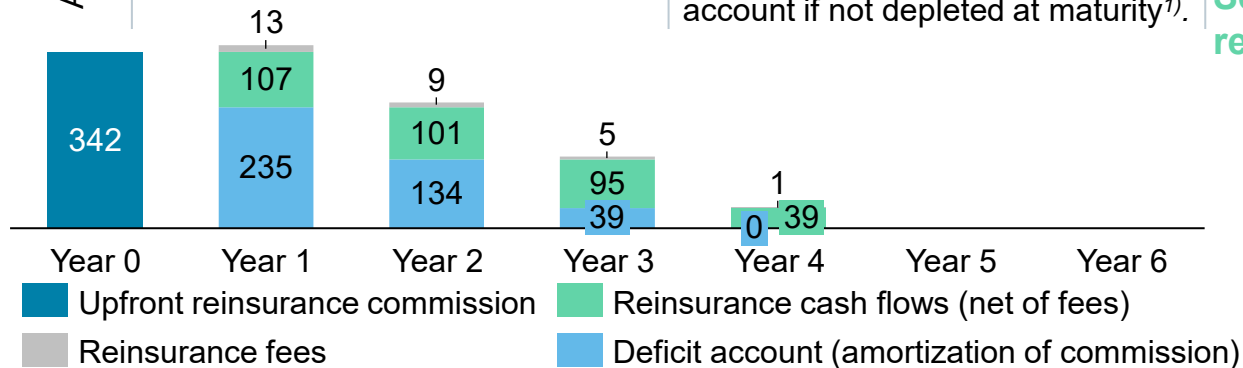
# 03 Case Study 1

## Reinsurance financing solutions: Remote risk transfer

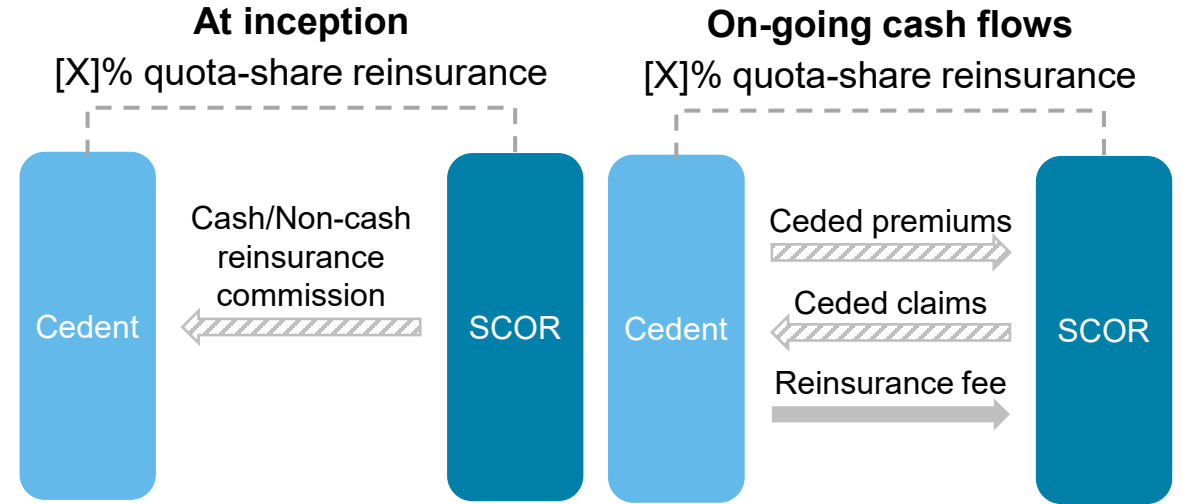
### Up-front cash/non-cash reinsurance commission with a deficit account

#### What is the cover about?

	Cash	Non-Cash
At inception	The reinsurance commission is sized as a % of the present value of future expected net cash flows amortizing through a deficit notional account. SCOR pays in cash an up-front reinsurance commission	Reinsurance commission recognized as a reinsurance receivable (no cash movement)
Over the lifetime of the treaty	The repayment of the reinsurance commission is self-funded from the emergence of reinsurance profits. Repayment in cash of the reinsurance commission	Only the reinsurance fees are settled in cash
At maturity	The earliest of the depletion of the deficit account and the maturity date set in the treaty.	SCOR would settle in cash the outstanding balance of the deficit account if not depleted at maturity <sup>1)</sup> .



#### Structure diagram



#### Several structural mitigants can be added to make a loss event remote for SCOR:

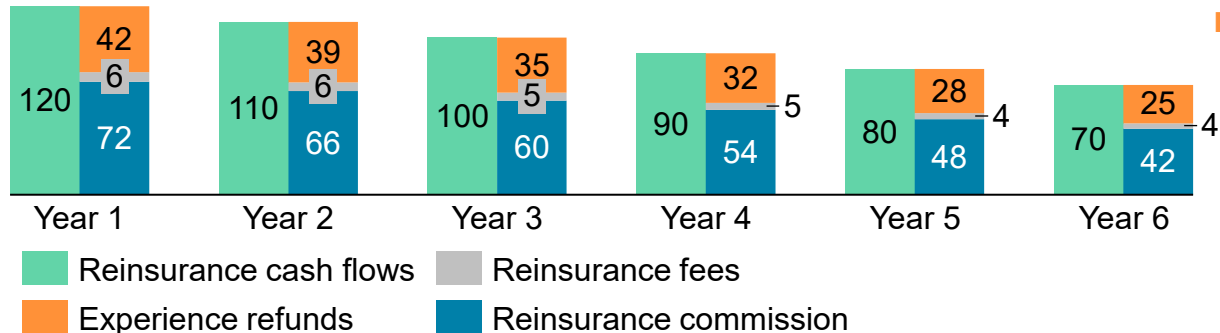
- A loss carried forward clause for years with less than expected risk margin,
- Low financing as a % of total VIF (~[60-70]%),
- If an amortization schedule is set with an experience refunds, a clawback mechanism of all prior year experience refunds to repay financing,
- Minimum [30]% retention by the cedent ensuring strong interest alignment,
- Minimum premium volume guarantee by the cedent protecting against high lapsation.

# 03 Case Study 1

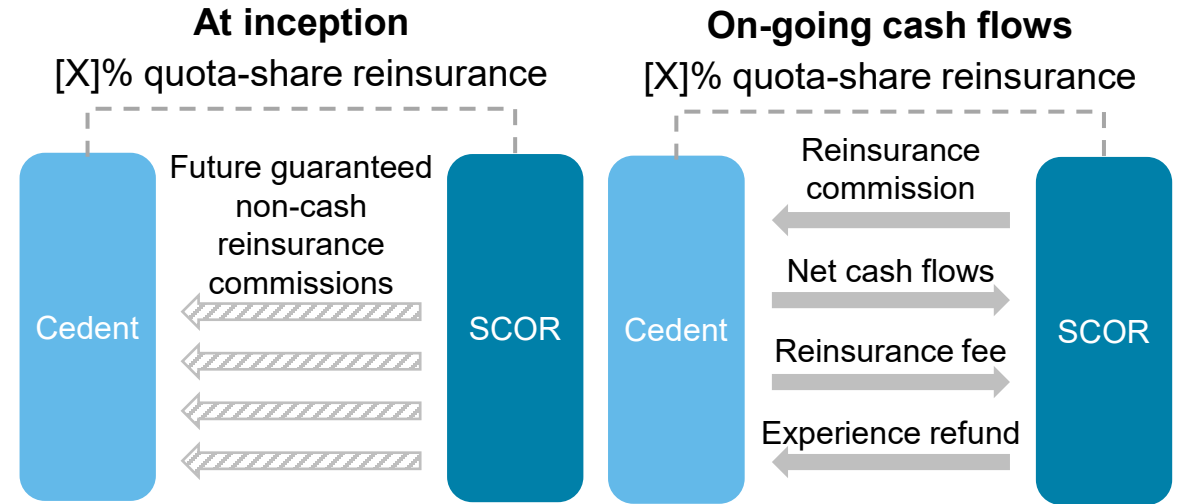
## Reinsurance financing solutions: Remote risk transfer Guaranteed schedule of cash reinsurance commissions

### What is the cover about?

- The solution accelerates recognition of future profits.
- At inception,
  - The amount of future reinsurance commissions are guaranteed and established. They are sized as a percentage of future expected net cash flows.
  - There is no cash movement. The cedent recognizes a reinsurance receivable based on the present value of future guaranteed reinsurance commissions.
- Over the lifetime of the treaty,
  - The reinsurance commissions are settled every year irrespective of the actual biometric risk or lapse risk experience.
  - Though the commissions are mentioned in cash, there will be no actual cash settlement between parties, other than the reinsurance fees payable to SCOR. Indeed, the cash reinsurance commissions are sized to be less than the expected emerging net cash flows, unless there is a material deviation of the biometric or lapse experience.



### Structure diagram



### Several structural mitigants can be added to make a loss event remote for SCOR:

- Low financing as a % of total VIF (~[60-70]%),
- Clawback mechanism of all prior year experience refunds to repay financing,
- Minimum [30]% retention by the cedent ensuring a strong alignment of interest,
- Minimum premium volume guarantee by the cedent protecting against high lapsation.

# 03

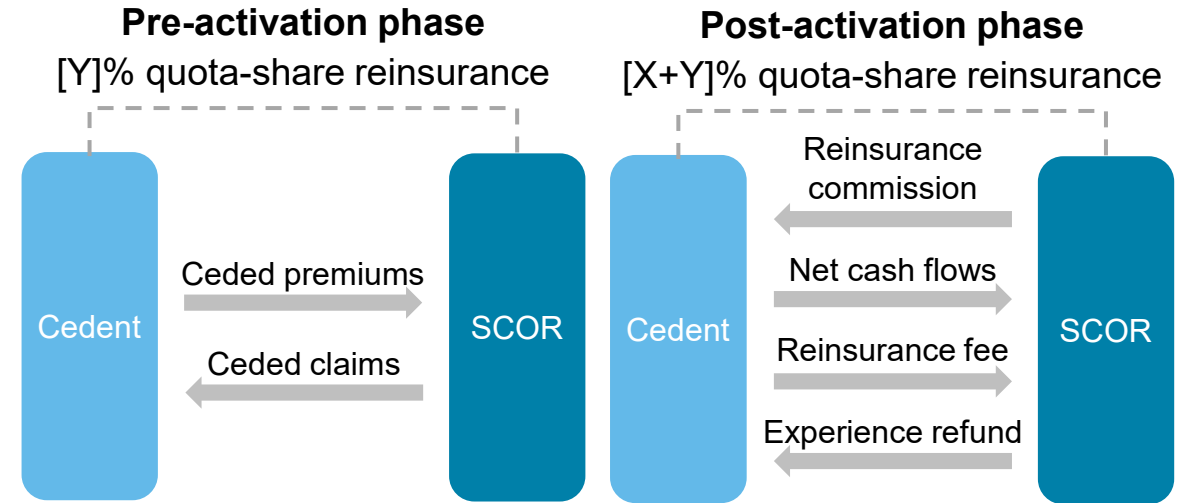
Case Study 1

## Contingent Reinsurance financing solutions Management action tool under S2 to manage volatility of Solvency Ratio

### What is the cover about?

- With the contingent feature, the insurer is given the flexibility to choose when to draw the reinsurance commission over a pre-agreed draw down period.
- At inception, both parties would enter into a small fixed quota-share (generally enough to cover SCOR's administrative expenses and cost of capital, which should remain small) booked as a traditional quota-share.
- Over the drawn-down period, the insurer would have the right (but not the obligation) to increase its quota-share up to an agreed maximum in exchange for SCOR to provide VIF reinsurance financing.
- Activation of variable part of the quota-share would be subject to conditions to protect SCOR against the insolvency of the cedent, such as an actuarial appraisal of future cash flows at the time financing is drawn by the cedent.

### Structure diagram – Guaranteed commissions



### What are the benefits/impacts for the cedent?

- Use as a management action under Solvency 2 (ORSA) for the cedent by having a capital solution readily available.
- Lock in reinsurance capacity today for future capital needs without upfront cost for it.

# 03 Case Study 2

## Mass Lapse Stop-Loss

### Reduce Solvency Capital Requirements

#### What is the cover about?

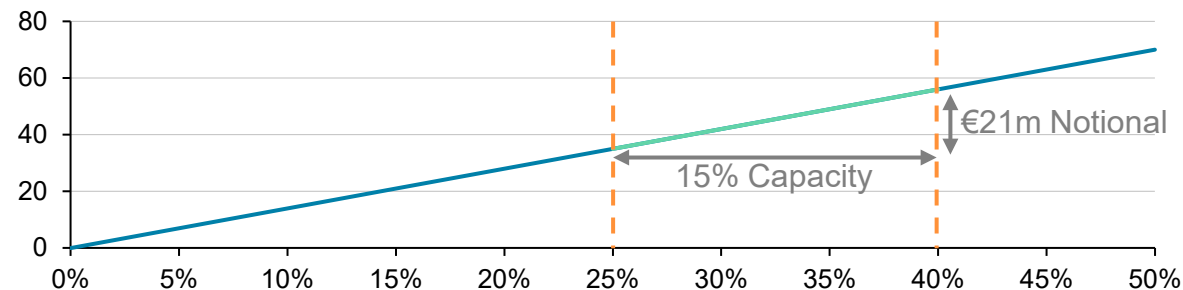
- Mass lapse stop loss structure with attachment point set below 40% shock lapse under the standard formula.
- Reinsurance claim is paid if lapse experience over a one-year period exceeds a given attachment point and is capped at exhaustion point corresponding to 40% mass lapse requirement.
- The reinsurance contract lasts for 1-2 years. The solution needs to have a 1-year minimum duration for the regulator to recognize the SCR relief under SII. Therefore, the structure rolls forward every quarter by one quarter, i.e. SCOR always covers 4 successive quarters of risk until a termination notice is given.

#### What are the benefits/impacts for the cedent?

- The solution offers a pure Mass lapse SCR relief under SII.
- The solution benefits insurers using Standard Formula, having portfolios with low & stable historic lapse experience (i.e. funeral, mortgage products) where the stress test requirement using Standard Formula is too conservative.
- Ideal policies are those where the individual has a strong incentive not to lapse their policy – for example negative tax consequences, surrender charges, policy is attached to their mortgage etc.

#### Illustration

	Main features
Type	Mass lapse stop-loss agreement
Duration	2 years
Quota-Share	20%
Attachment point	25% – €175m (loss in PVFP compared to BE)
Detachment point	40% – €280m (loss in PVFP compared to BE)
Capacity	€21m = (€280m - €175m) x 20%
Lapse definition	<ul style="list-style-type: none"> <li>• Policy fully or partly terminated or surrendered</li> <li>• Change of status from regular premium paying policy to “paid-up” status with no future premium</li> </ul>
BE Lapse rate	12%
Premium	RoL (Rate on line): [1.5]% of capacity







# Thank You

P&C Alternative Solutions  
L&H Financial Solutions

June 2022