
SCOR
The Art & Science of Risk

Structured Reinsurance to Manage P&L Volatility

Presentation by:

P&C Alternative Solutions

L&H Financial Solutions

Italian Seminar

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Structured Reinsurance to Manage P&L Volatility

01 **Case studies applicable to P&C**

02 Case studies applicable to L&H

Objectives

Structured reinsurance addresses increasing pressure on predictability of returns from the investors, rating agencies or other stakeholders

① Stabilize earnings

Solutions aiming to:
- Hedge against a major loss or severe loss deviation;
- Manage accounting mismatch, replicate the equalization reserve into an IFRS environment;
- Enhance financial predictability

② Managing market cycles

Solutions aiming to:
- Manage actively the risk retention by building own capacity within the strong SCOR balance sheet.
- Gain independence from reinsurance cycles

③ Securing dividends

Solutions aiming to:
- Avoid unexpected volatility leading to inability to pay dividend, be it from the subsidiaries to the group or from the group to the shareholders.

Structures

Wide range of solutions varying from Aggregate Stop Loss and Multi-Line contracts to Adverse Development Covers, on multiyear basis.

- A multiyear contract can be built to store capacity which will become available to cope with increase in retention or increase in reinsurance price.
- A multiyear contract can help to smooth unexpected volatility over time.

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Objectives

Structured reinsurance as meeting place of supply and demand

Risk Appetite

Structured reinsurance concentrate the actual risk-transfer towards an area acceptable for both SCOR and the client.

Volatility management

Earning protection
and
budget certainty

Cost Efficiency

the client pays only for the optimized risk transfer while managing the funding of their retention.

Financing as a self-management tool

The combination of financing, multiyear and profit commission

Multiyear

A multiyear transaction allows to manage volatility over a cycle:

- provides certainty to the client (certainty over future reinsurance costs)
- ensures sufficient income to the reinsurer: the transaction is designed so that the total premium, paid over several accounting years, is sufficient to face at least one "bad year".

Example: on a 3 years deal, the annual premium could be equal to 50% of one annual capacity. This means that:

- the first limit would be paid by the cedant
- the first limit is spread over the deal period

Profit Commission

Financing usually requires a large premium. Consequently, for the solution to be competitive and to be accepted by the client, a profit commission is embedded.

Most often, the profit commission is defined as 100% of the premium minus the loss and minus a "reinsurer's margin", if positive.

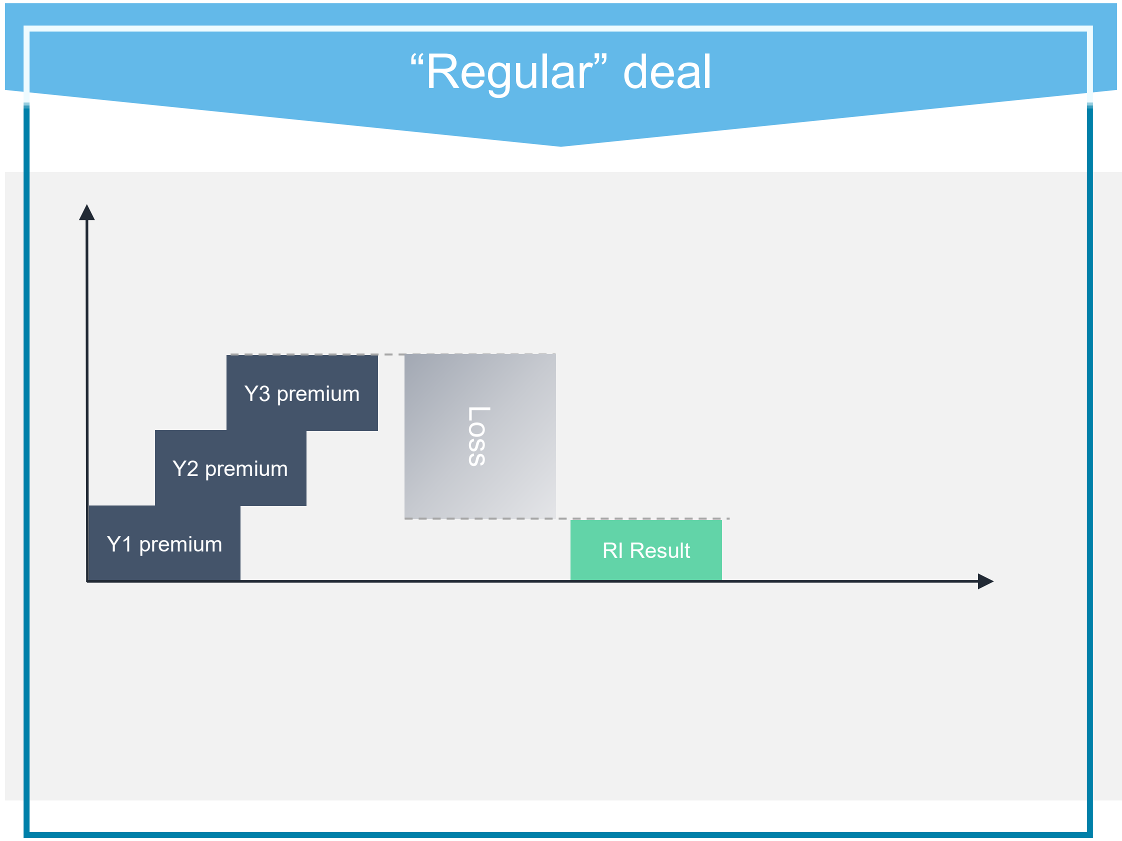
PC = 100% (Premium – Reinsurer Margin – Loss)$^{+}$

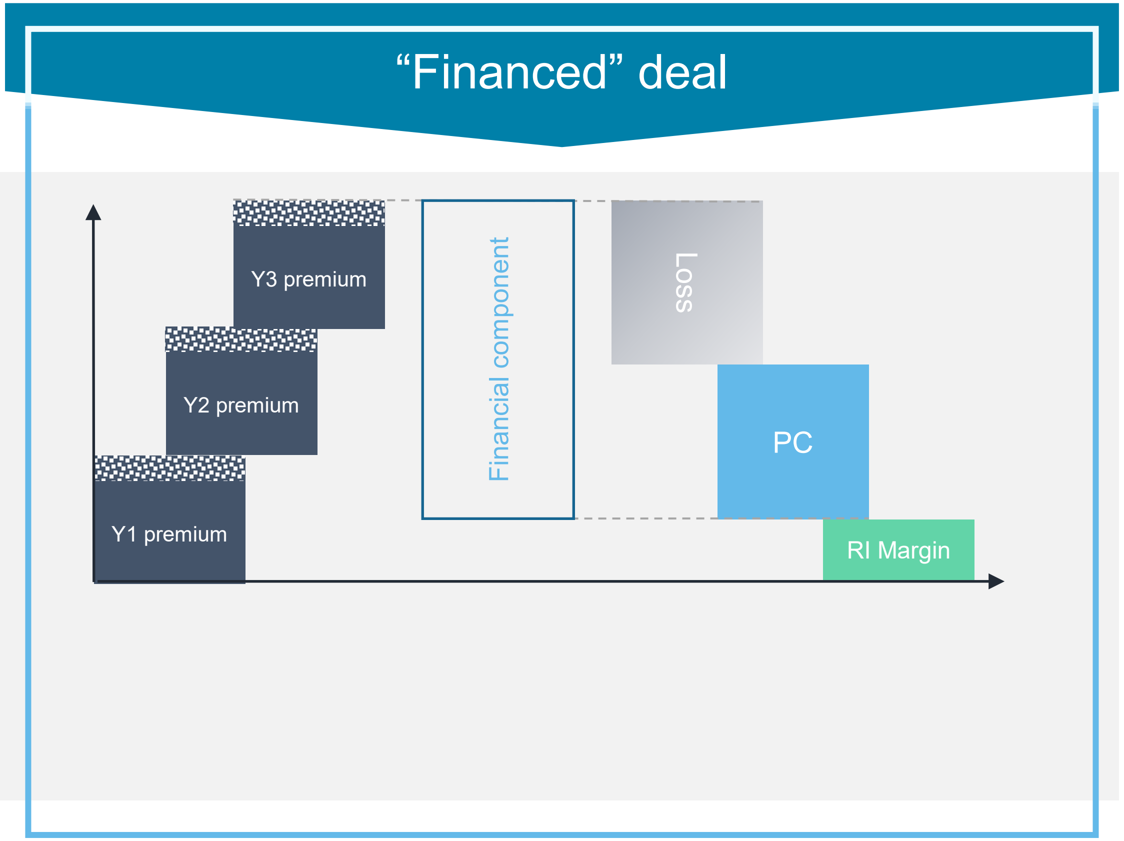
The ultimate economic cost of a structured solution shall be understood as the margin kept by the reinsurer after any profit-sharing scheme. This remunerates the reinsurer for the risk transfer outside of the retention and the financial component.

P&L and Cash-flow Volatility Management

01 Financing

Illustrative functioning





The total term premium minus the “reinsurer margin” can be considered as a “financial component“, economically equivalent to a self-financing, that is used to pay for the loss, until depletion:

- If the total loss amount is below the financial component amount, the remaining financial component is returned to the client as a profit commission; the reinsurer keeps only the reinsurer margin
- If the total loss amount is above the financial component amount, the reinsurer will pay the extra amount.

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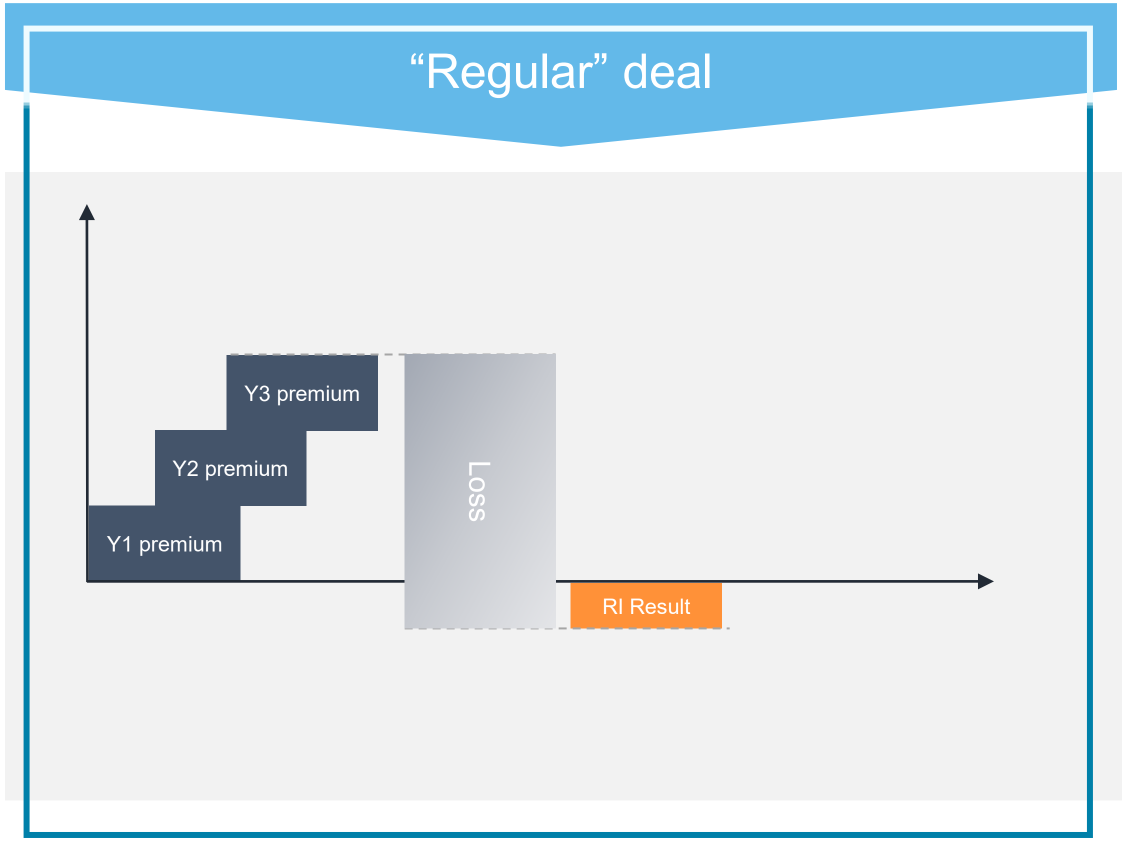
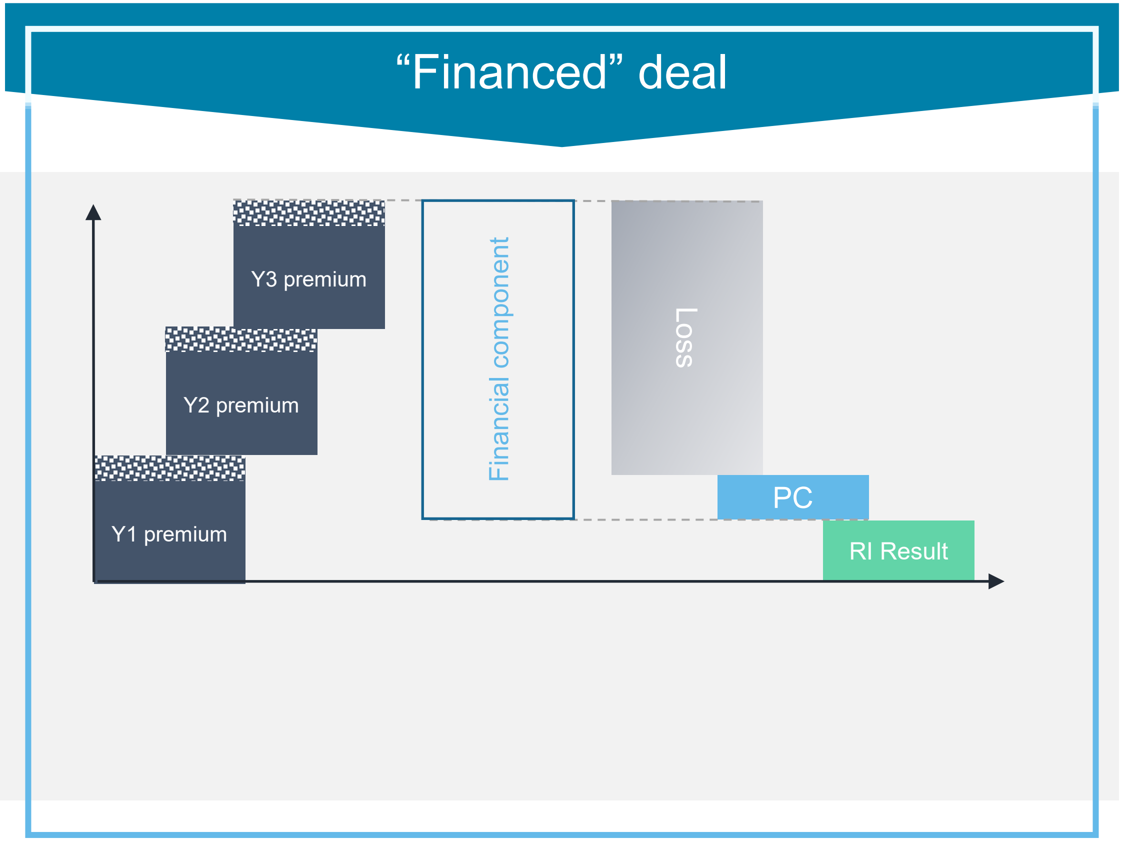
01 P&L and Cash-flow Volatility Management
Financing

Illustrative functioning: Large Loss





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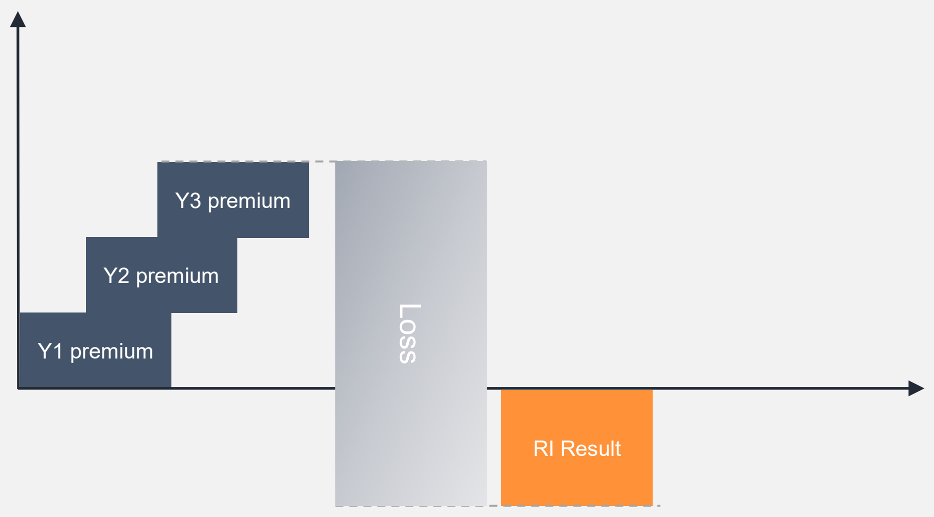
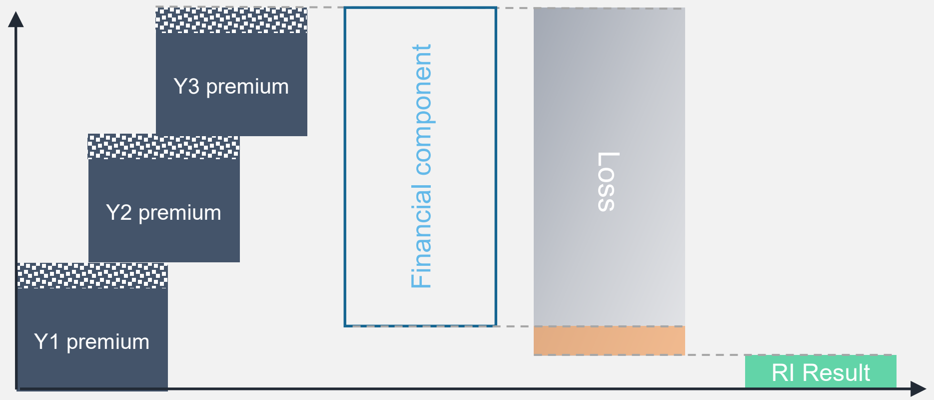
Financing

Illustrative functioning: Larger Loss

“Regular” deal



“Financed” deal



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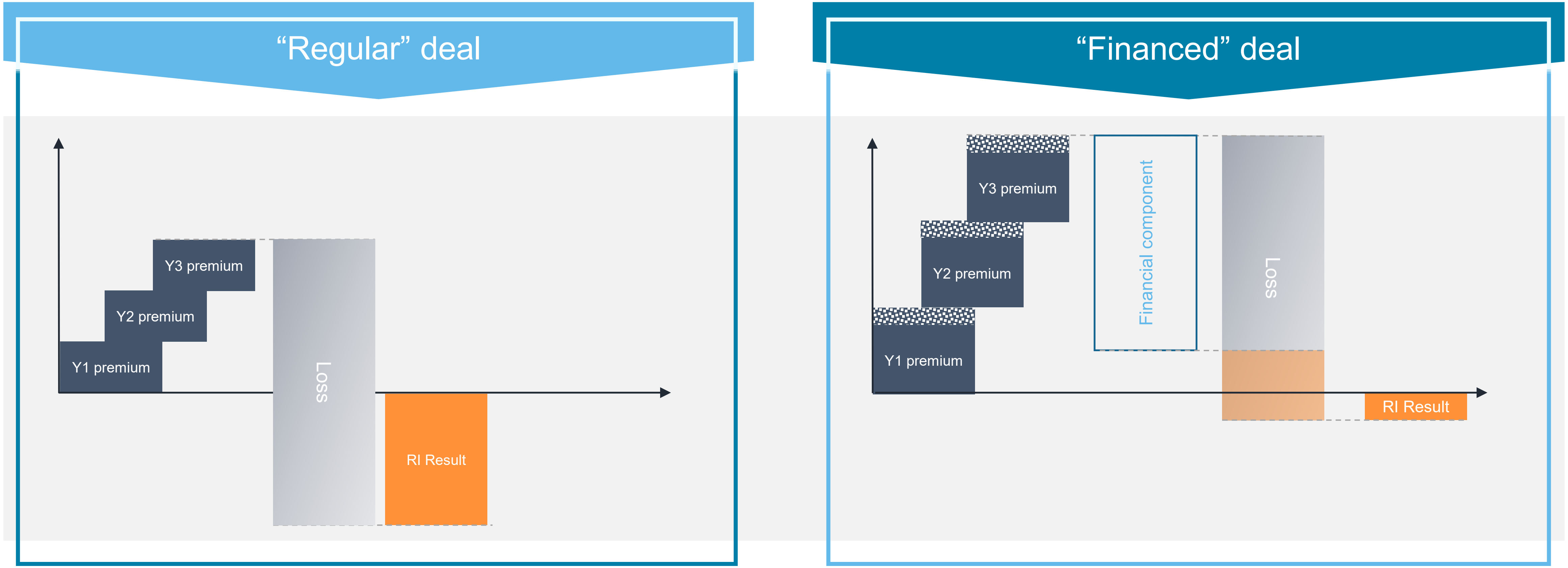
Financing

Illustrative functioning: Even Larger Loss



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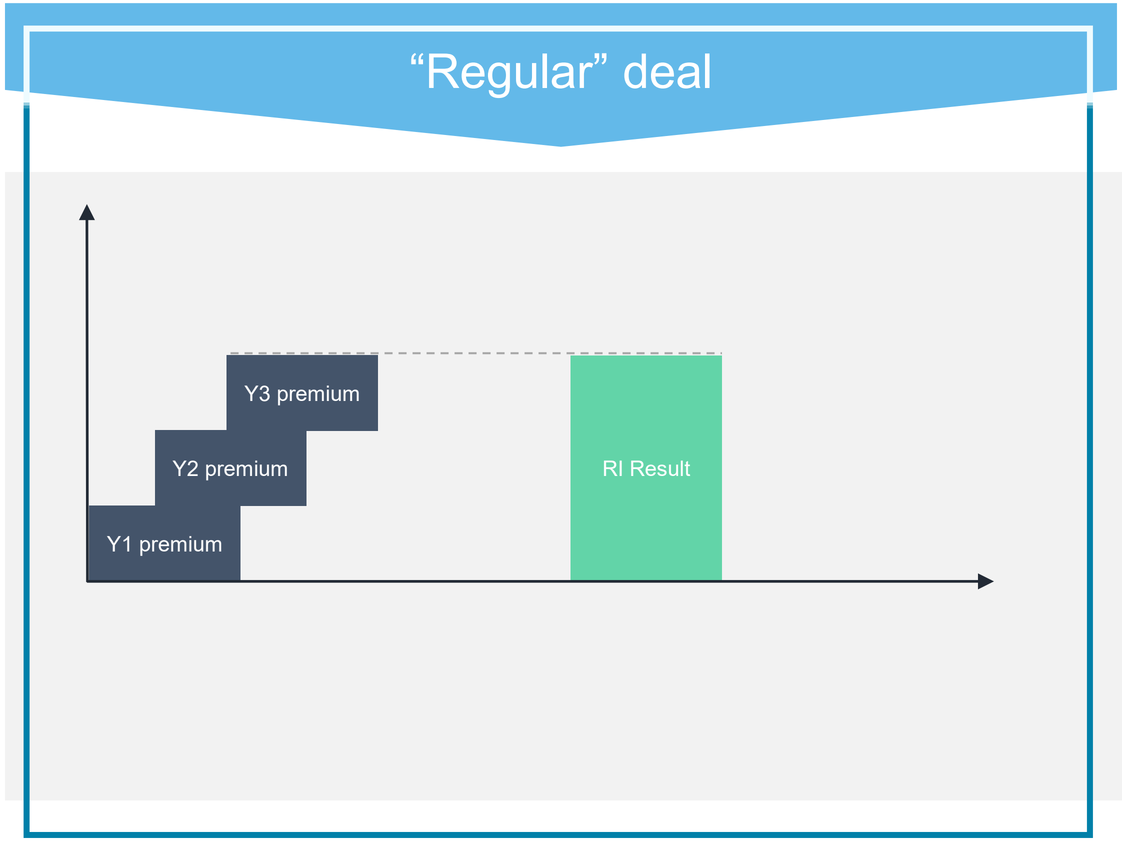
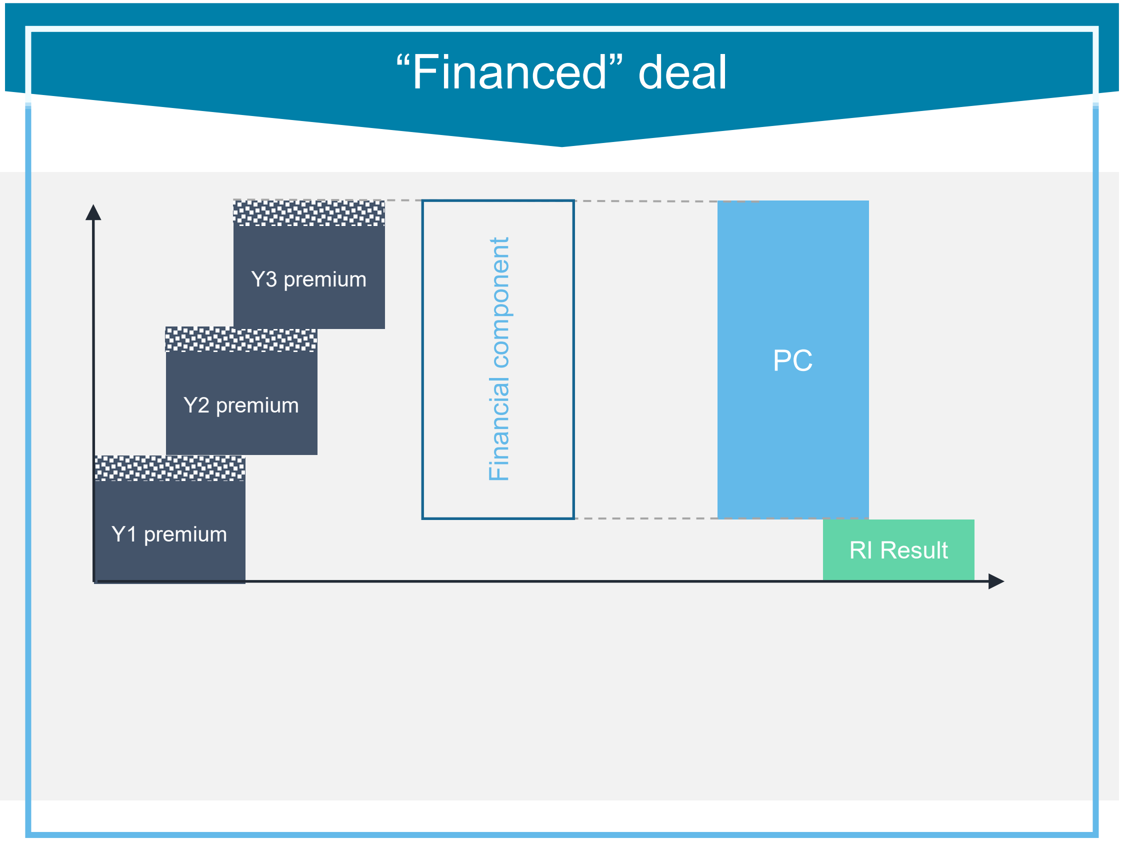
Financing

Illustrative functioning: No Loss





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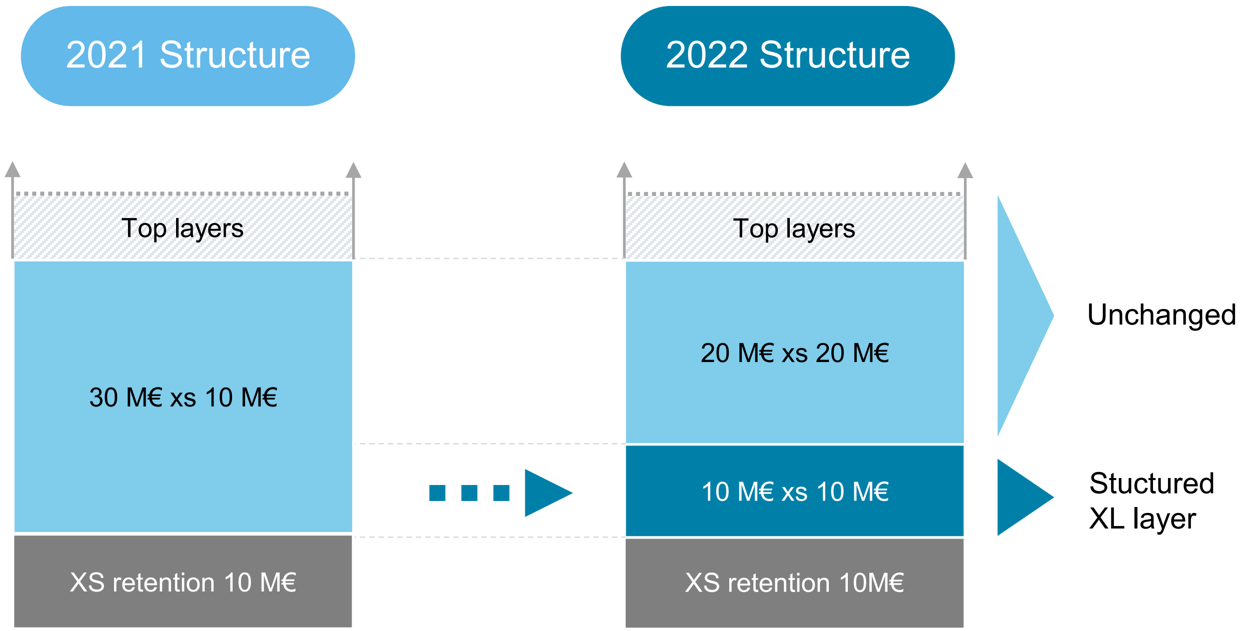
01 Context

P&L and Cash-flow Volatility Management

Case Study: Multiyear Structured Excess of Loss

- After suffering from a new trend of high frequency CAT losses, the client was facing a difficult renewal:
  - Wish to maintain the same attachment point
  - Difficulty to match the reinsurance budget with the risk appetite.

- SCOR Alternative Solutions, together with the local P&C team proposed and placed a private financed layer in order to find a "middle ground" that would satisfy both parties through a stronger alignment of interest.



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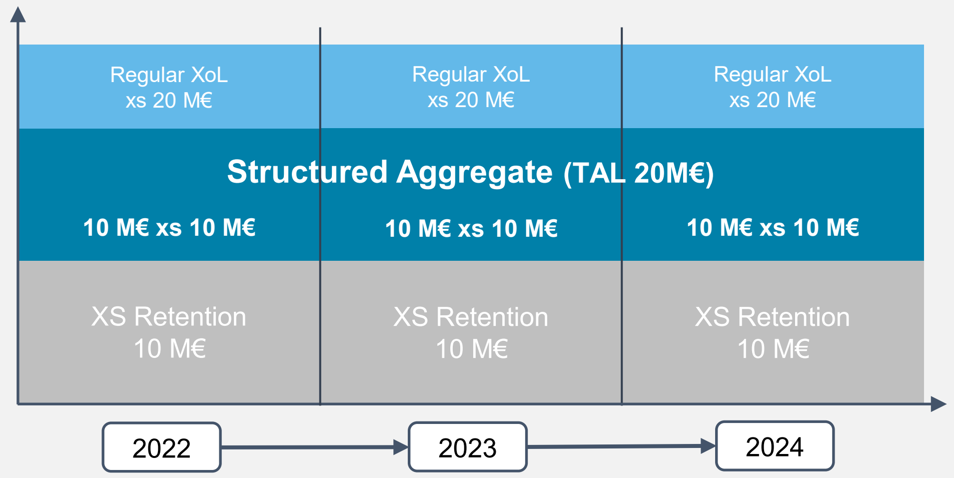
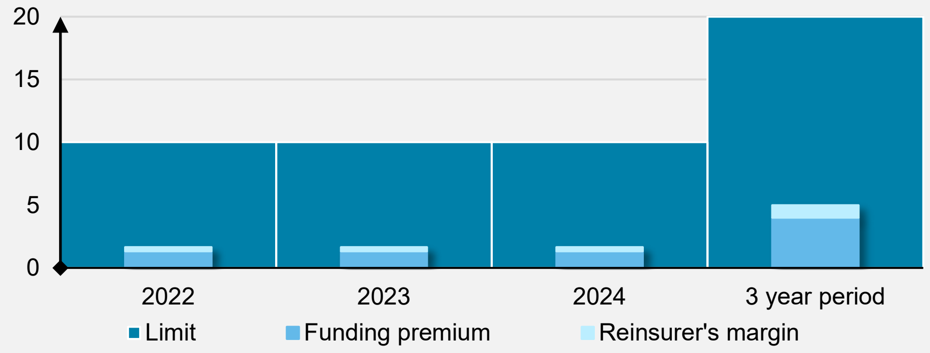
01 P&L and Cash-flow Volatility Management

Case Study: Multiyear Structured Excess of Loss

Main Features

Inception Date	1/1/2022
Term	3 years
XoL Layer	10 M€ xs 10 M€
Term Aggregate Limit	20 M€
Annual Premium	5 M€
Reinsurer's Margin	20%
Profit Commission	100% of (Premiums - Reinsurer's Margin - Losses)
Brokerage	10% on the Reinsurer Margin





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Case Study: Multiyear Structured Excess of Loss

Scenario Analysis

			Year 1	Year 2	Year 3	Total
Below Average Scenario	Loss to layer		10 M€	0 M€	0 M€	10 M€
	Premium	Reinsurer Margin	-1 M€	-1 M€	-1 M€	**-3 M€**
		Premium – Reins. Margin	-4 M€	-4 M€	-4 M€	-12 M€
	Profit Commission		-6 M€	4 M€	4 M€	2 M€
	Total					**-3 M€**

Profit Commission to offset 3 years Commitment

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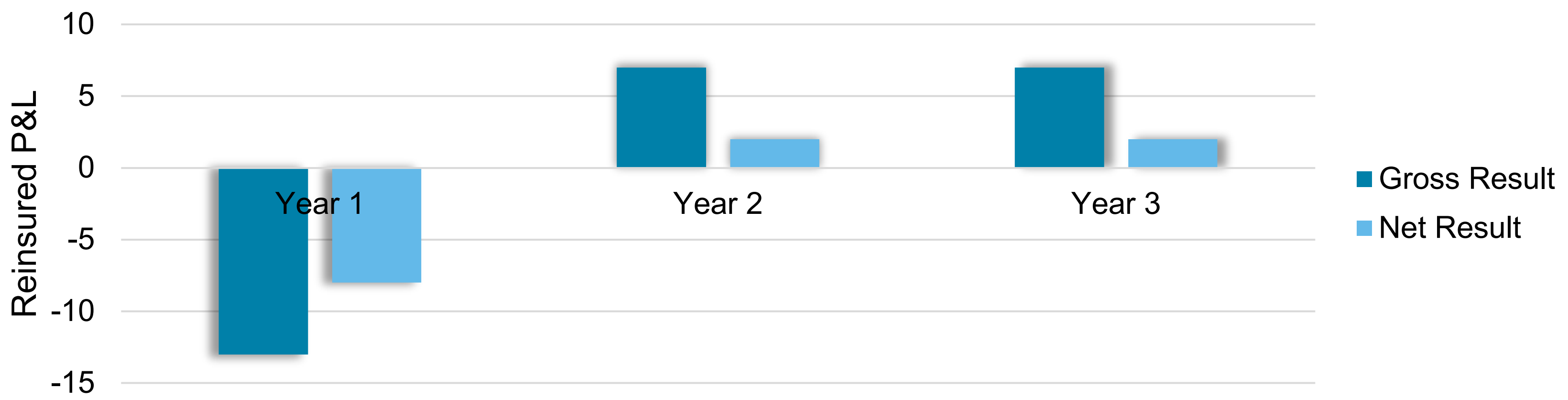
Fair Profit Sharing



01 P&L and Cash-flow Volatility Management

Case Study: Multiyear Structured Excess of Loss

Scenario Analysis

2/2

Below Average Scenario			Year 1	Year 2	Year 3	Total
	Loss to layer		10 M€	0 M€	10 M€	20 M€
	Premium	Reinsurer Margin	-1 M€	-1 M€	-1 M€	-3 M€
		Premium – Reins. Margin	-4 M€	-4 M€	-4 M€	-12 M€
	Profit Commission		-6 M€	4 M€	-6 M€	0 M€
	Total					**5 M€**

Premium locked on the 3 years

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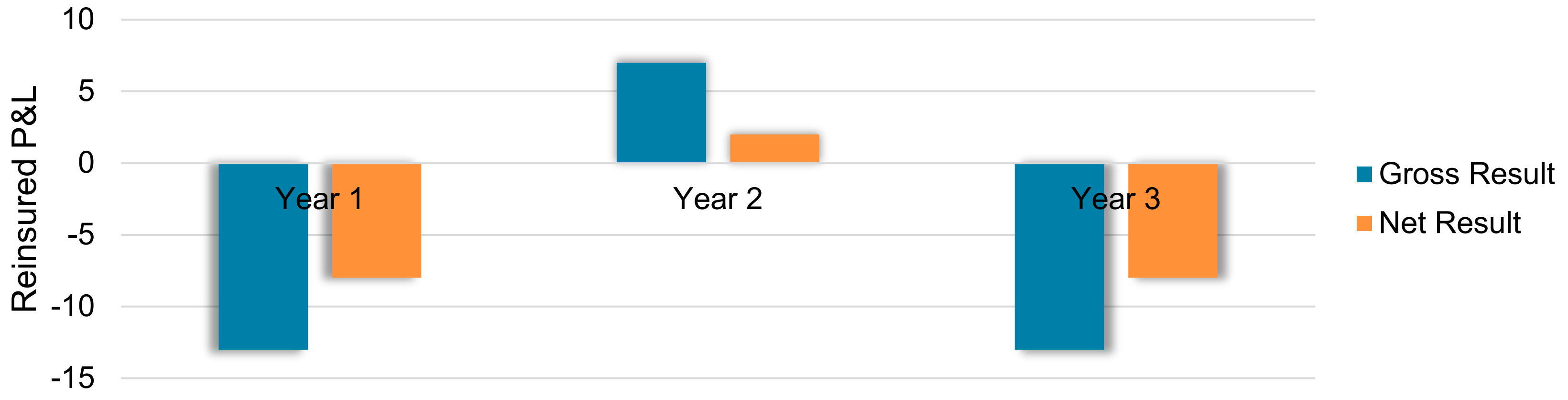
Know Retention, Capacity and Premium



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Case Study: the Cancellation Option

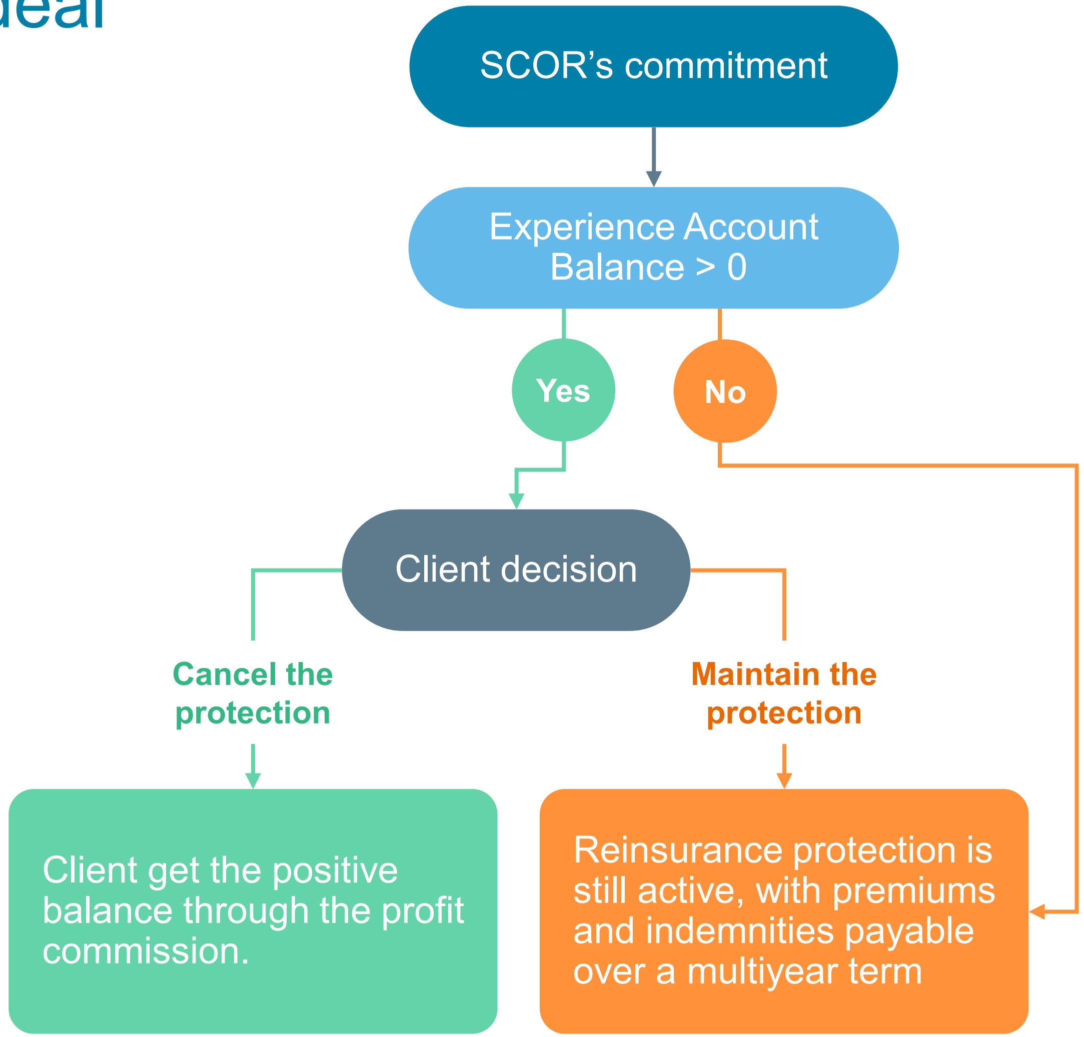
An additional features to exit the multiyear deal

- **If the experience account is positive** (i.e. the Premium - Reinsurer’s margin – Losses > 0) **the cedant decides at the end of each year whether to cancel or not the protection**.

- At cancellation, the reinsurer shall pay to the client **a profit commission equal to the positive balance**. This means that in the no loss scenario, the cost of the protection is equal to the reinsurer margin.

- The client usually decides to maintain the protection in case of major adverse experience. In that case, the reinsurer would face a contract with almost certainty to make a loss.

- **To get a chance for some form of payback**, the relationship shall then be maintained with a multiyear commitment.



Case Study: the Cancellation Option

An additional features to exit the multiyear deal

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	Loss to layer		0 M€			0 M€
	Premium	Reinsurer Margin	-1 M€			**-1 M€**
		Premium – Reins. Margin	-4 M€			-4 M€
	Profit Commission		4 M€			4 M€
	Total					**-1 M€**

Option to cancel after a loss-free year

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Attractive price thanks to the option

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01 P&L and Cash-flow Volatility Management

Key Takeaways

Structured solution tends to become more popular as the traditional reinsurance market hardens

Efficiency: only risk that needs to be transferred, is transferred. It optimizes reinsurance cost by only buying what is needed.

Reinsurance stability: with multiple years contract cedants can 'lock-in' covers for an extended period.

Accounting benefit: recognition of reinsurance contracts in financial reporting (P&L statement) is key.

In the environment where the need for "optimization" and "efficiency" have become the norm, insurance companies are increasingly considering tailor-made reinsurance. These structured solutions protect them against a range of risks, while keeping the reinsurance premium within their budget.

Structured Reinsurance to Manage P&L Volatility

01 Case studies applicable to P&C

02 **Case studies applicable to L&H**

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Life & Health - Structure reinsurance to manage P&L volatility
Case studies

Up-front non-cash VIF financing to alleviate non-deferrable acquisition costs

Solution implemented and renewed several times

Loss Portfolio Transfer to manage claims volatility on P&L

Solutions that mitigate adverse short-term volatility of claims

Solutions aim to P&L strain due to high acquisition expenses or adverse claims experience

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01 Case Study 1: Alleviate non-deferrable acquisition costs

Up-front non-cash VIF financing

Reminder of the reinsurance structure

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[1].

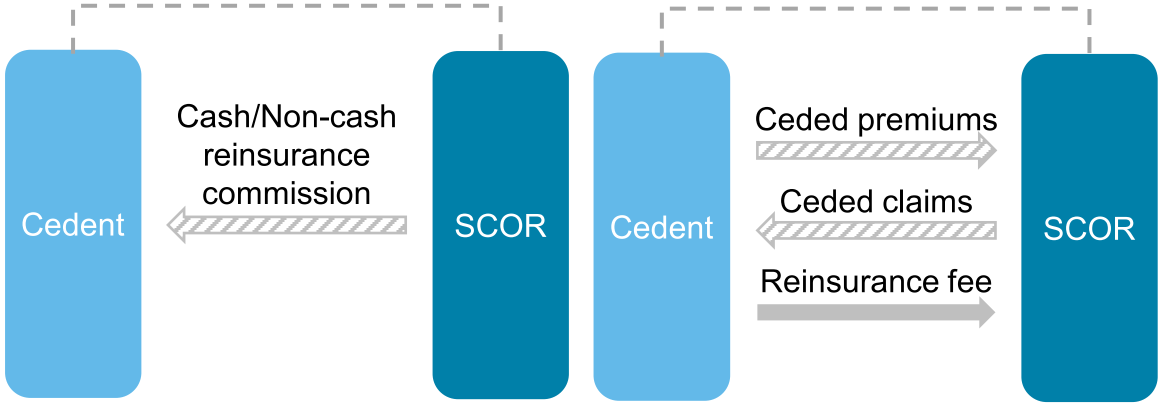
Structure diagram

At inception

[X]% quota-share reinsurance

On-going cash flows

[X]% quota-share reinsurance



- 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.

1) Under adverse biometric risk experience of the reinsured portfolios

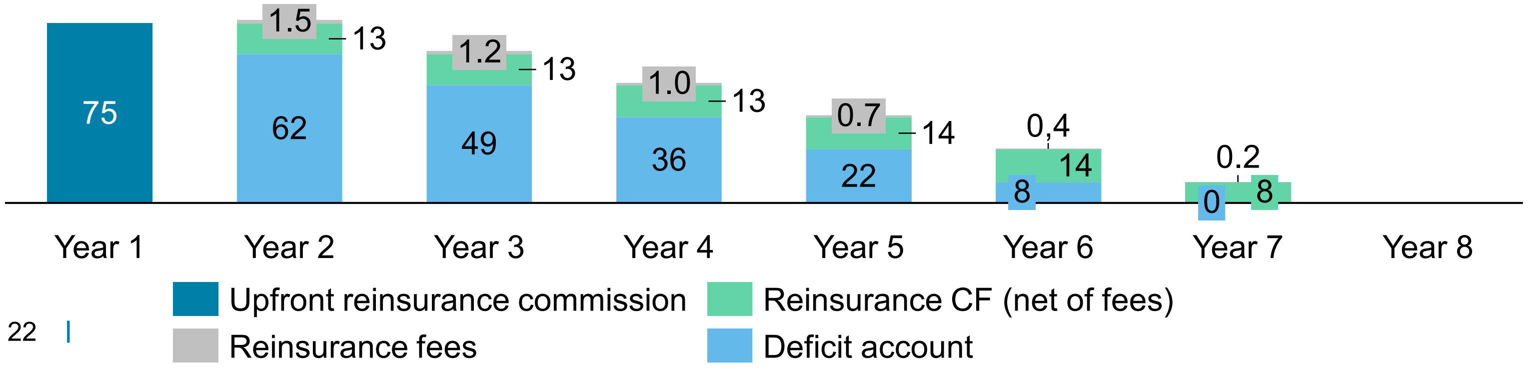
01

Case Study 1: Alleviate non-deferrable acquisition costs

Up-front non-cash VIF financing

Solution implemented by SCOR for a cedent in the UK

- SCOR has been providing non-cash reinsurance financing to a UK based insurer since 2018 to support them in their expansion in the UK. Acquisition costs are non-deferrable expenses as the policies are renewable annually causing a significant first-year P&L strain under IFRS.
- SCOR's solution guarantees the emergence of future profits beyond the one-year renewability period via a large upfront reinsurance commission thus enabling the cedent to defer the cost over the expected lifetime of the policies (average 5-7 years).
- SCOR provided its fourth tranche of commission financing of £20-30m in 2021 for a total outstanding financing balance of £80m.
- The financing solution is non-cash where any cash settlement owed by SCOR will be deferred at the 10-year maturity date if the outstanding deficit account balance has not been fully repaid due to adverse claims and lapse experience. SCOR collects a fee payable quarterly on the total balance of the deficit account with excess reinsurance profits refunded back to cedent.



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01 Case Study 1: Alleviate non-deferrable acquisition costs

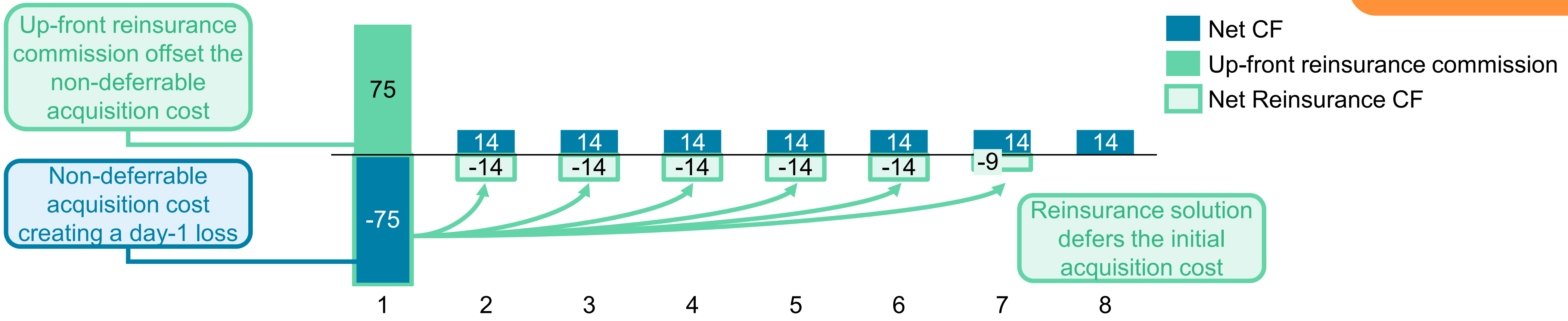
Up-front non-cash VIF financing

Up-front commission as fully earned through P&L

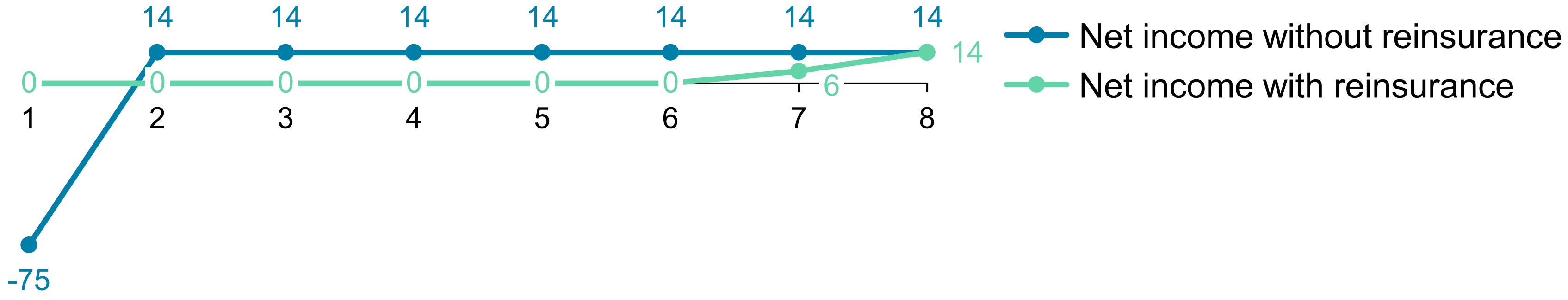
Simplified assumptions

100% quota-share

Net cash flows without and with reinsurance solution



Net income pattern without and with reinsurance solution



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01 Case study 2: Manage claims volatility on P&L

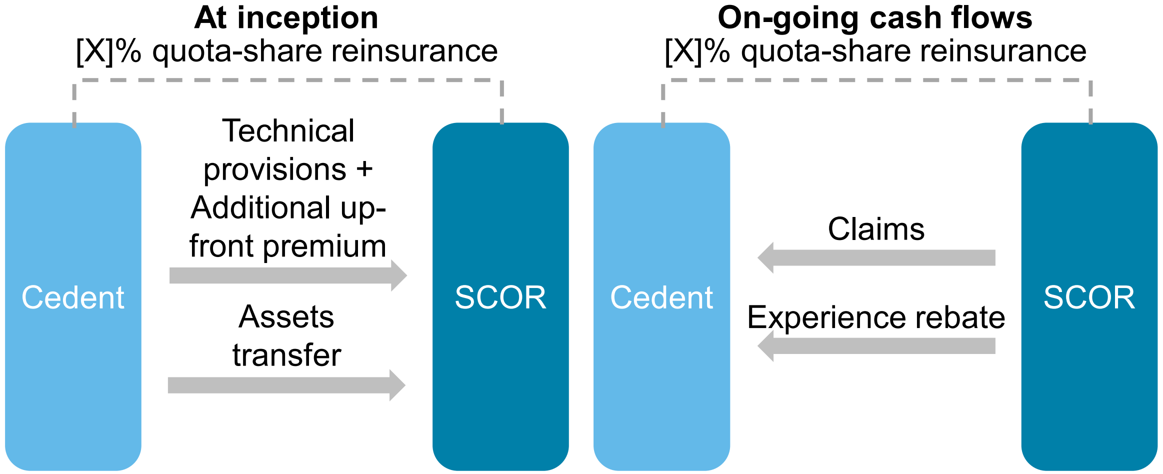
Loss Portfolio Transfer on Long-Term Disability

Overview

What is the cover about?

- The solution is a traditional reinsurance quota-share with an initial transfer of technical reserves on long-term disability portfolio of claims in-payment policies. In other words, the active policies not on claims payment would be carved-out due to the additional complexity in managing the incidence rates.
- The solutions aims to provide sufficient P&L stability through an effective protection of adverse recovery rates, adverse longevity improvements, change in baseline mortality assumptions, and degree of disability pay-outs.
- The transferred reserves are the best estimates reserves with an additional initial premium. In exchange, SCOR guarantees the future claims obligations over a sufficiently long maturity date to provide the desired P&L stability.
- Key features:
  - Initial premium paid as buffer by the cedent can generally be deferred to mitigate any P&L strain at inception of reinsurance treaty
  - Experience rebate paid overtime by SCOR if actual claims experience arise as expected
  - Low cost as sufficient buffer would be provided to protect against first euro claims above best estimates,
  - Smoothing of future profits emergence, which is partially offset by an adverse day-1 loss recognition,
  - Loss payment by SCOR would be subject to an aggregate amount loss limit.

Structure diagram



- At inception,
  - The book value reserves with an additional premium are transferred to SCOR on day-1. The potential gap in views on best estimates between the reinsurer and the cedent is managed by the additional upfront premium.
  - The reserves are either deposited back to the cedent (FWH) or on SCOR's balance sheet (Assets transfer).
- Over the lifetime of the treaty,
  - SCOR pays claims at the agreed quota-share.
  - SCOR sends back margins from the release of reserves net of the excess claims.

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01 Illustration

Case study 2: Manage claims volatility on P&L

Loss Portfolio Transfer on Long-Term Disability

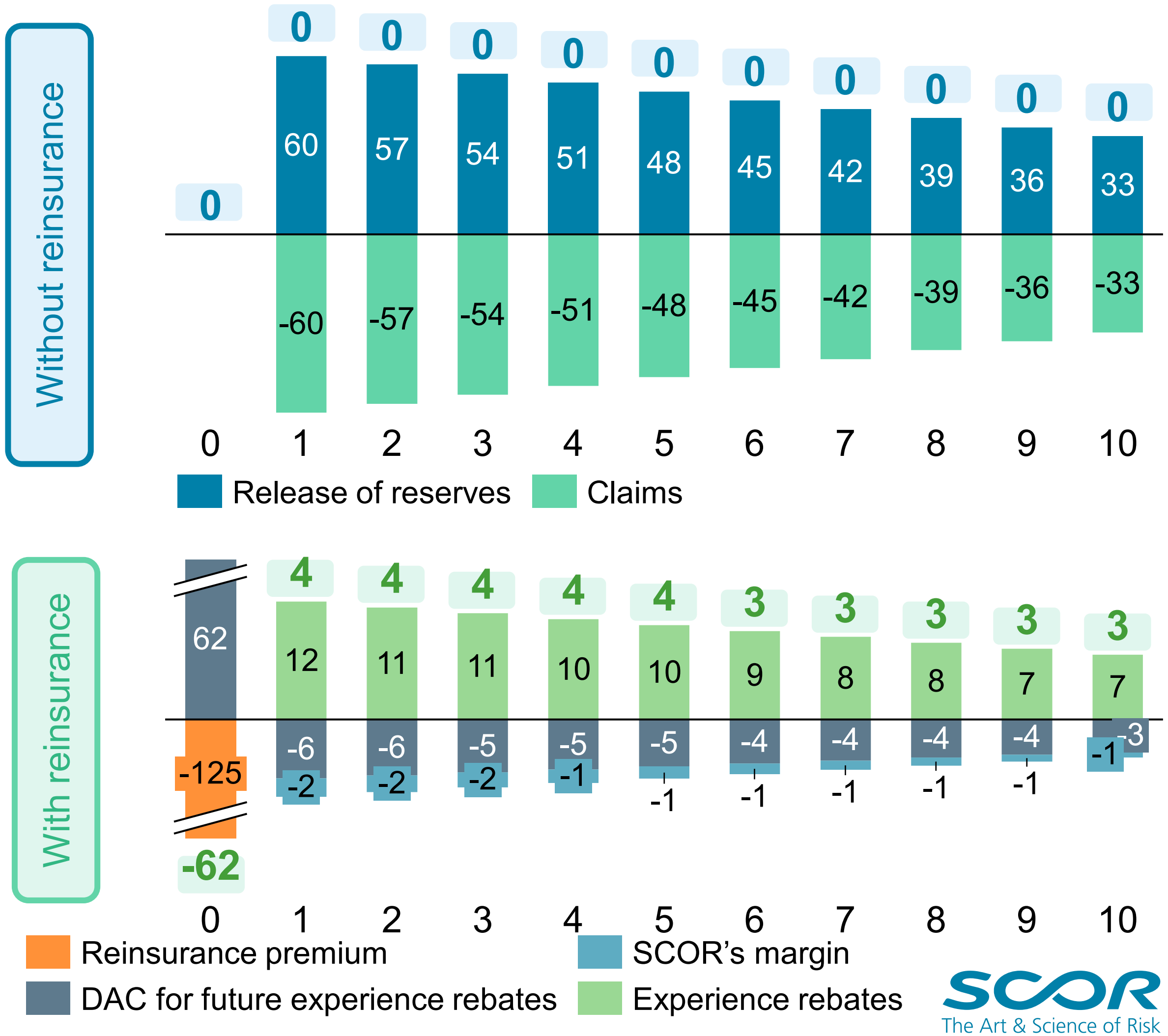
Assumptions

- Initial reserves: €625m
- SCOR's fee as % reserves: 0.30%
- Annual % claims run-off: 5%
- Technical rate: 0%
- Buffer as % of reserves: 20%
- Additional day-1 premium: €125m

- The LPT has a day-1 loss due to payment of additional premium to SCOR, which is paid back as an experience rebate over time.

- This additional premium covers a buffer of 20% above best estimates reserves which could vary depending on the certainty of best estimates cash flows.
- This is partly offset by the recognition of a DAC at inception equivalent to a proportion of future experience rebates payable by SCOR (assume 50% of total rebates). In theory, if the full amount of future experience rebates could be recognized then the day-1 impact would be 0.
- A reinsurance fee of [30]bps on the reserves is paid annually to SCOR.

Net cash flows without and with LPT



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01

Case study 2: Manage claims volatility on P&L

Loss Portfolio Transfer on Long-Term Disability

Sensitivities

- The present value of net cash flows is presented over the lifetime of the deal without and with the LPT solution for different stress scenarios.
- The volatility of the future cash flows is significantly higher without the LPT structure.
- The impact of loss in investment income between the credited rate on reserves at risk free rate (RFR) versus technical rate has been ignored. This could be significant depending on the spread over RFR.
- Such impact is to be carefully assessed as this could have a significant impact on the loss recognition on day-1. It is to note that SCOR would not guarantee excess spread above RFR over the lifetime of the deal.

NPV of CF	**Without** reinsurance solution NPV CF / *var. vs Base*	**With** reinsurance solution NPV CF / *var. vs Base*
Base case	0	-14
+5% claims	-31 / *-31*	-45 / *-31*
+10% claims	-62 / *-62*	-76 / *-62*
+15% claims	-94 / *-94*	-107 / *-94*
+20% claims	-125 / *-125*	-139 / *-125*
+25% claims	-156 / *-156*	-139 / *-125*

Thank You

June 2022

Italian Seminar

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