CCIA ANNUAL COLLABORATIVE

How Captive Owners Obtain the Most Value from their Service Providers

CCIA
CONNECTICUT
Captive Insurance Association

Hartford Yard Goats

THE UNIFYING THEORY OF DARK ENERGY AND DARK MATTER:

Negative masses and matter creation within a modified Lambda-CDM cosmological framework

Group Exercise –

Discuss J.S. Farnes' ground-breaking assertion that the compelling puzzle of the existence of the Dark Universe may have been due to a simple mathematical sign error.

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THINKING DIFFERENTLY:

UNIQUE ALTERNATIVE REINSURANCE STRUCTURES FOR CAPTIVES

Presented By:

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Consulting

How Captive Owners Obtain the Most Value from their Service Providers

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"Any customer can have a car painted any color that he wants so long as it's black".

Henry Ford – referring to the Model T

WHAT DO WE USUALLY SEE?

"Cookie Cutter" Approach (any color car...)

- XOL with attachment point just above highest average loss amount

- Multi-Year where PC is calculated on cumulative experience, not individual U/W years

- Franchise or qualifying deductible in addition to XOL retention

- Rated on unrealistic loss ratio swing, and/or "losses loaded" scheme

Causes & Effects of Inefficient/Inappropriate Reinsurance Structures

- New project/no specific data

- Wrong broker

- Wrong reinsurer

- Just one, or a combination of seemingly risk-appropriate term/conditions can crater a ceding company
  - One hot year of multi-year deal
  - Wrong retention
  - Punitive Swing (Rate and/or PC)
  - Devious deductibles or additional retentions/premiums

Reality Check

- Start-up captives/RRG's/specialty programs may not have a choice

  - Lack of company/book specific information
  - Financial solvency to exposure ratios
  - Regulatory concerns

- Mature captives/RRG's are (usually) better candidates for unique structures

  - More robust financials can withstand greater net retained exposure
  - Management/regulators and others more comfortable with scaled or more complex programs

TYPICAL FUNCTIONS OF REINSURANCE

- Risk Transfer – higher limits
- Income Smoothing – predictable results – lower capital needed
- Surplus Relief – proportional treaties only
- Reinsurer's Expertise
- Creating a manageable and profitable portfolio of insured risks - create a more balanced and homogeneous portfolio of insured risks – predictable results.

REINSURANCE

- The right tool for the right job
- Reinsurance structure should address the challenge(s) facing the captive.

WRONG REINSURANCE STRUCTURE

- Okay, probably not death.

WRONG REINSURANCE STRUCTURE

▪ But you could be poisoning your balance sheet.

How Captive Owners Obtain the Most Value from their Service Providers

Conditions in USD	Per Risk XL
Limit	300,000
Retention	200,000
Annual Limit	650,000
Term Limit (4 Limits)	1,200,000
Annual Premium[1]	15.5%
Additional Premium	110%
maximum over term[2]	35%
Reinsurer's Margin	0%

EPI in USD	2018	2019	2020
	1,676,000	1,900,000	1,950,000

Experience Account				
	2018	2019	2020	Total
Incoming fund		(340,220)	(45,720)	
Annual Premium	259,780	294,500	302,250	856,530
Reinsurer's Margin	0	0	0	0
Ceded Losses	(600,000)	0	0	(600,000)
Outgoing Fund	(340,220)	(45,720)	256,530	

Impact on Profit and Loss Account				
	2,018	2,019	2,020	Total
Annual Premium to Reinsurer	(259,780)	(294,500)	(302,250)	(856,530)
Additional Premium to Reinsurer	(326,820)	0	0	(326,820)
Ceded Losses	600,000	0	0	600,000
Profit Commission	0	0	0	0
Total	13,400	(294,500)	(302,250)	(583,350)

OR THIS BLACK CAR...

How Captive Owners Obtain the Most Value from their Service Providers

Conditions in USD	Per Risk XL
Limit	300,000
Retention	200,000
Annual Limit	650,000
Term Limit (4 Limits)	1,200,000
Annual Premium	15.5%
Additional Premium	25%
maximum over term	237,500
Reinsurer's Margin	20%
Profit Commission	100%
Early Cancelation	Yes

EPI in USD	2018	2019	2020
	1,676,000	1,900,000	1,950,000

Experience Account				
	2018	2019	2020	Total
Incoming fund		(392,176)	(156,576)	
Annual Premium	259,780	294,500	302,250	856,530
Reinsurer's Margin	(51,956)	(58,900)	(60,450)	(171,306)
Ceded Losses	(600,000)	0	0	(600,000)
Outgoing Fund	(392,176)	(156,576)	85,224	

Impact on Profit and Loss Account				
	2,018	2,019	2,020	Total
Annual Premium to Reinsurer	(259,780)	(294,500)	(302,250)	(856,530)
Additional Premium to Reinsurer	(150,000)	0	0	(150,000)
Ceded Losses	600,000	0	0	600,000
Profit Commission	0	0	85,224	85,224
Total	190,220	(294,500)	(217,026)	(321,306)
Early Cancelation Option	No	No		

Agenda

1	Advanced Solutions
2	Case Studies
3	Multi-Year whole acount Stop Loss (numerical example)

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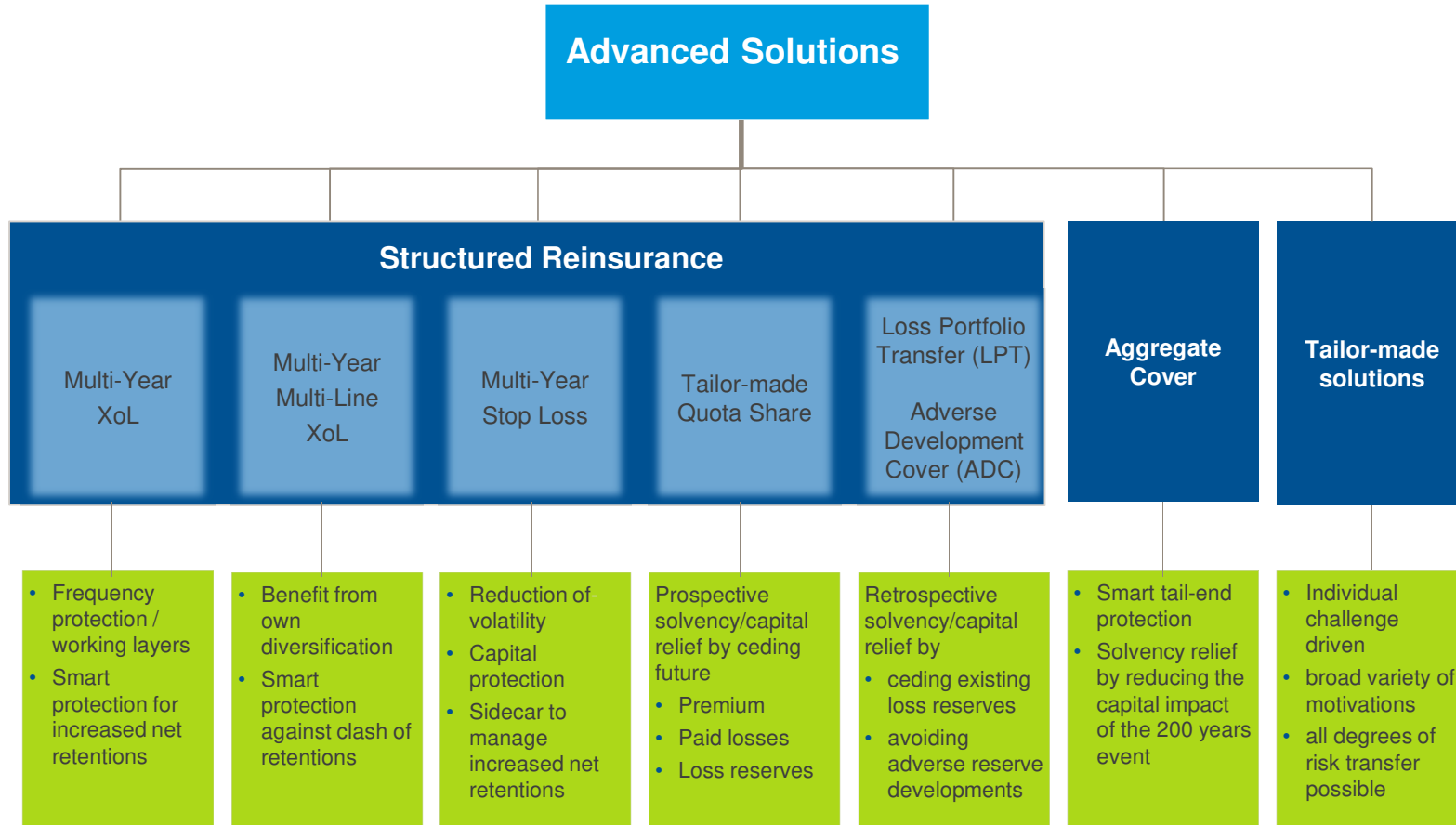
Advanced Solutions
One of the leading providers worldwide
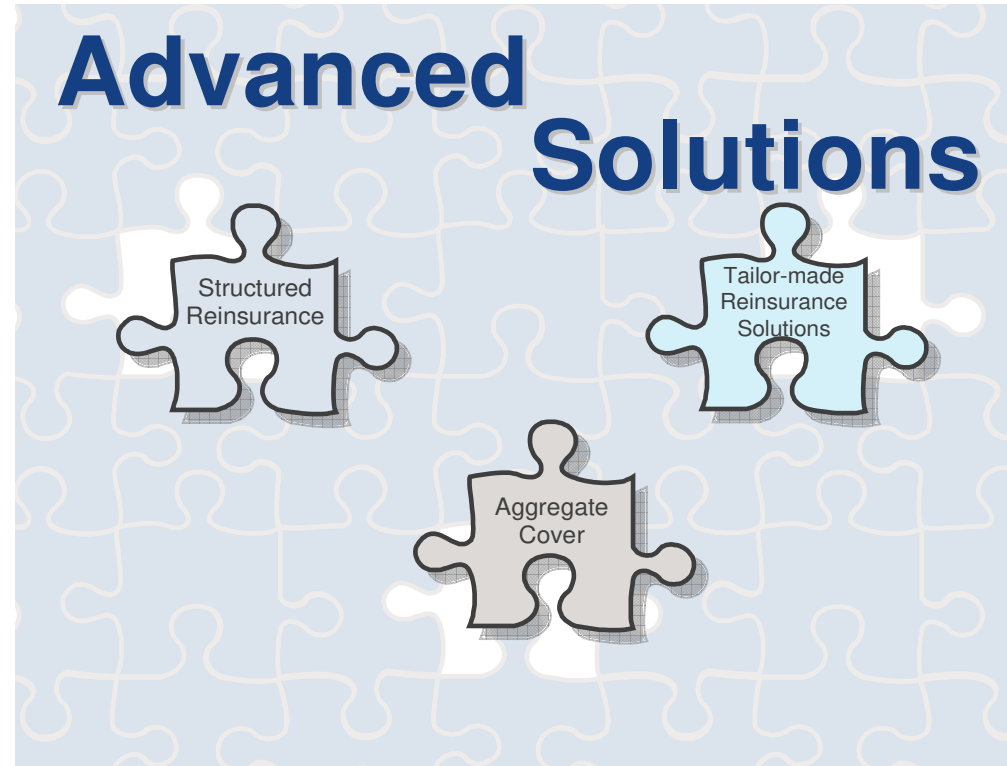
Solutions are found by focusing on questions rather than on concepts

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Advanced Solutions
Structured Reinsurance, Aggregate Cover and Tailor-made Solutions

Advanced Solutions

Structured Reinsurance

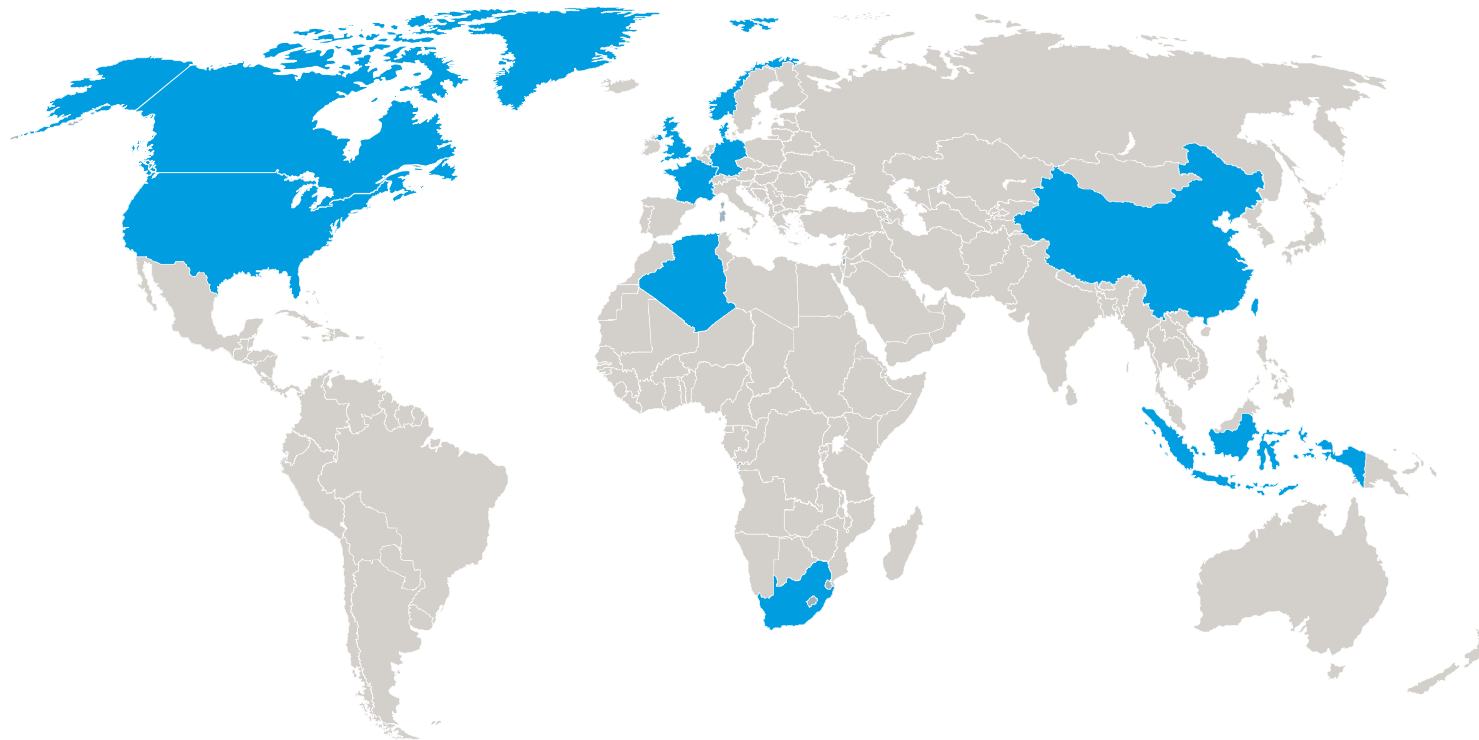| Multi-Year XoL	Multi-Year Multi-Line XoL	Multi-Year Stop Loss	Tailor-made Quota Share	Loss Portfolio Transfer (LPT) / Adverse Development Cover (ADC)	**Aggregate Cover**	**Tailor-made solutions**
• Frequency protection / working layers • Smart protection for increased net retentions	• Benefit from own diversification • Smart protection against clash of retentions	• Reduction of volatility • Capital protection • Sidecar to manage increased net retentions	Prospective solvency/capital relief by ceding future • Premium • Paid losses • Loss reserves	Retrospective solvency/capital relief by • ceding existing loss reserves • avoiding adverse reserve developments	• Smart tail-end protection • Solvency relief by reducing the capital impact of the 200 years event	• Individual challenge driven • broad variety of motivations • all degrees of risk transfer possible

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Advanced Solutions for Corporates & Captives
In-force treaties[1]

1) as of 31.12.2018

Well diversified portfolio
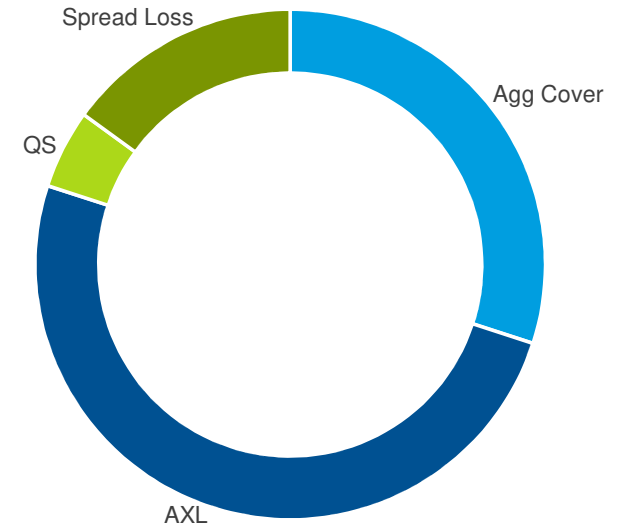
Thinking Differently: Unique Alternative Reinsurance Structures for Captives

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Corporate & Captive Contracts
Split by region and type

 # contracts by region

 # contracts by type

Africa

Asia

Europe

North America

Spread Loss

QS

Agg Cover

AXL
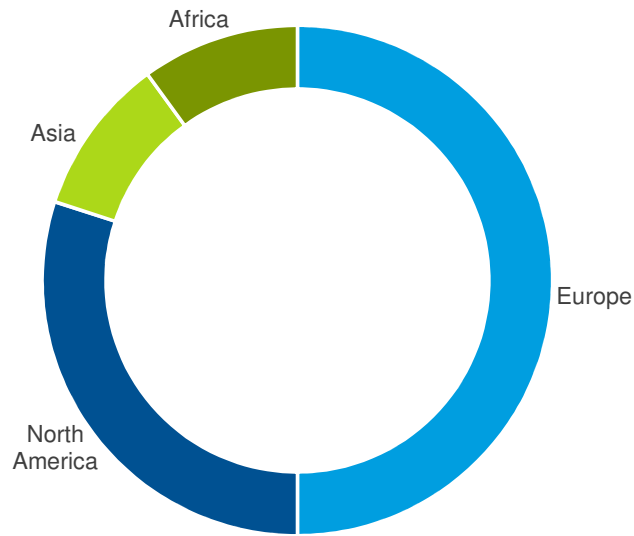
Demand differs from non-corporate business

Thinking Differently: Unique Alternative Reinsurance Structures for Captives

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Corporate's Main Activity
Not necessarily corresponding to the risk covered

**# contracts by corporate activity**
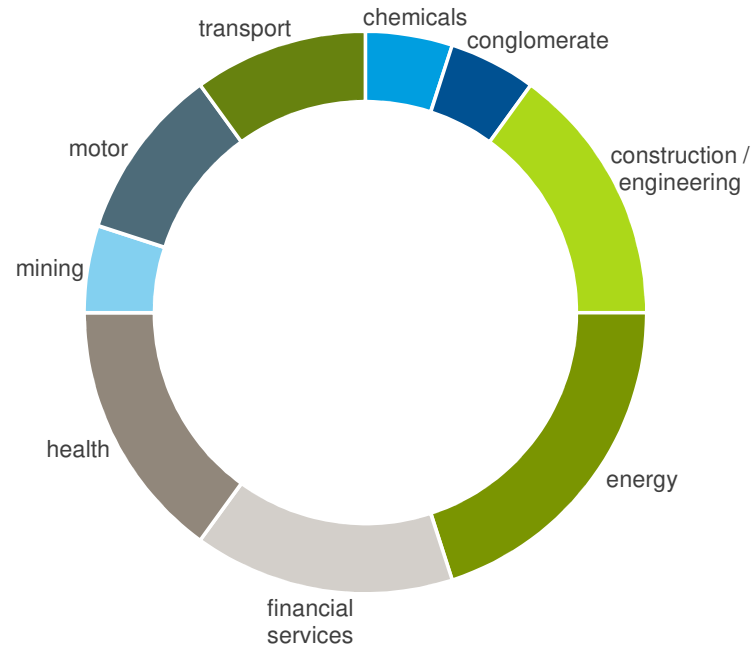
A wide variety of underlying business

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Agenda

Case 1 – Classical Spread Loss Solution
African mining company

- Demand for protection against PD / BI and environmental liability
- Volatile exposure due to strong dependency on gold price
- Limited availability of traditional (re)insurance capacity
- 5-year term "spread loss" solution protecting the client's captive
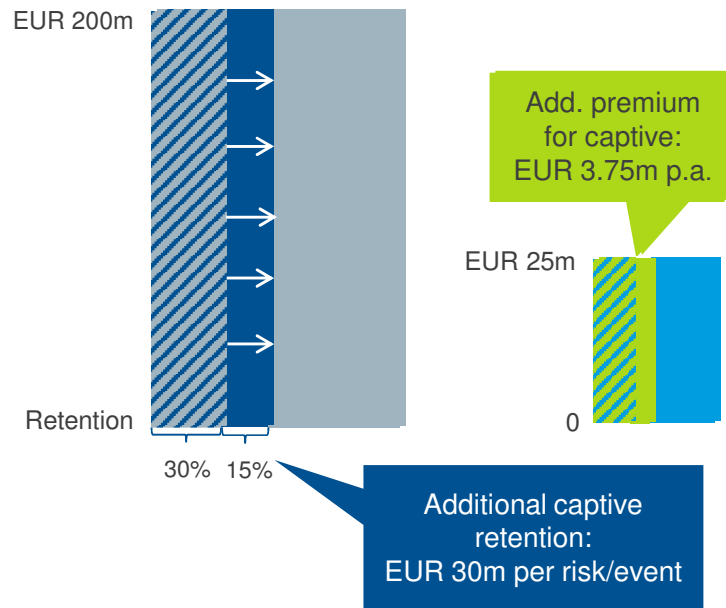- High funding component combined with substantial risk transfer
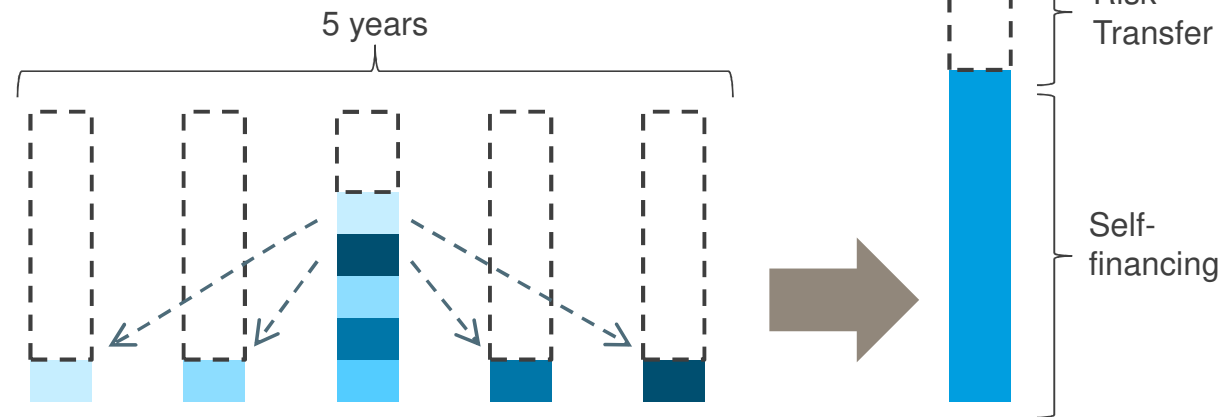
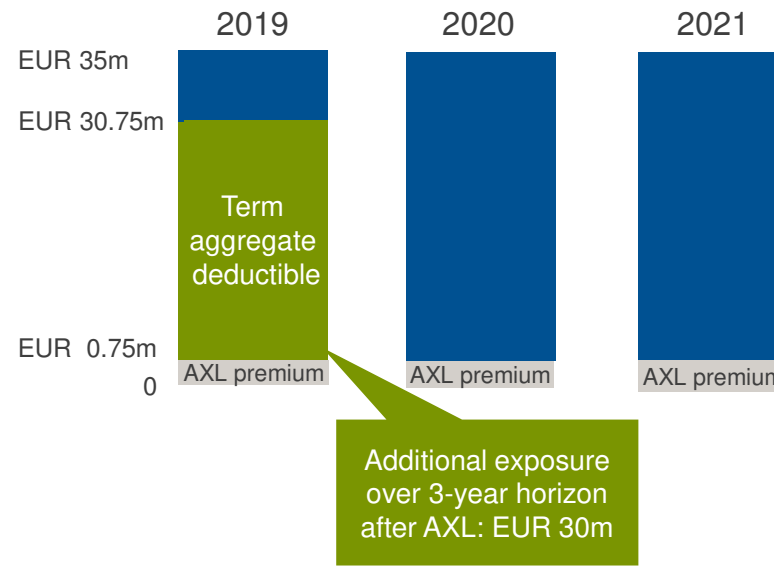**Captive insurance combined with spread loss creates win-win**

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Case 2 – Retaining More Profits in the Captive
European automobile manufacturer

First Layer of property program
Limit per risk/event (@ 12.5% RoL)

Premium

AXL to protect the additional liability
Coverage for aggregate annual claims

EUR 200m

Retention

30% 15%

Add. premium
for captive:
EUR 3.75m p.a.

EUR 25m

0

Additional captive
retention:
EUR 30m per risk/event

2019   2020   2021

EUR 35m

EUR 30.75m

Term
aggregate
deductible

EUR 0.75m

0

AXL premium   AXL premium   AXL premium

Additional exposure
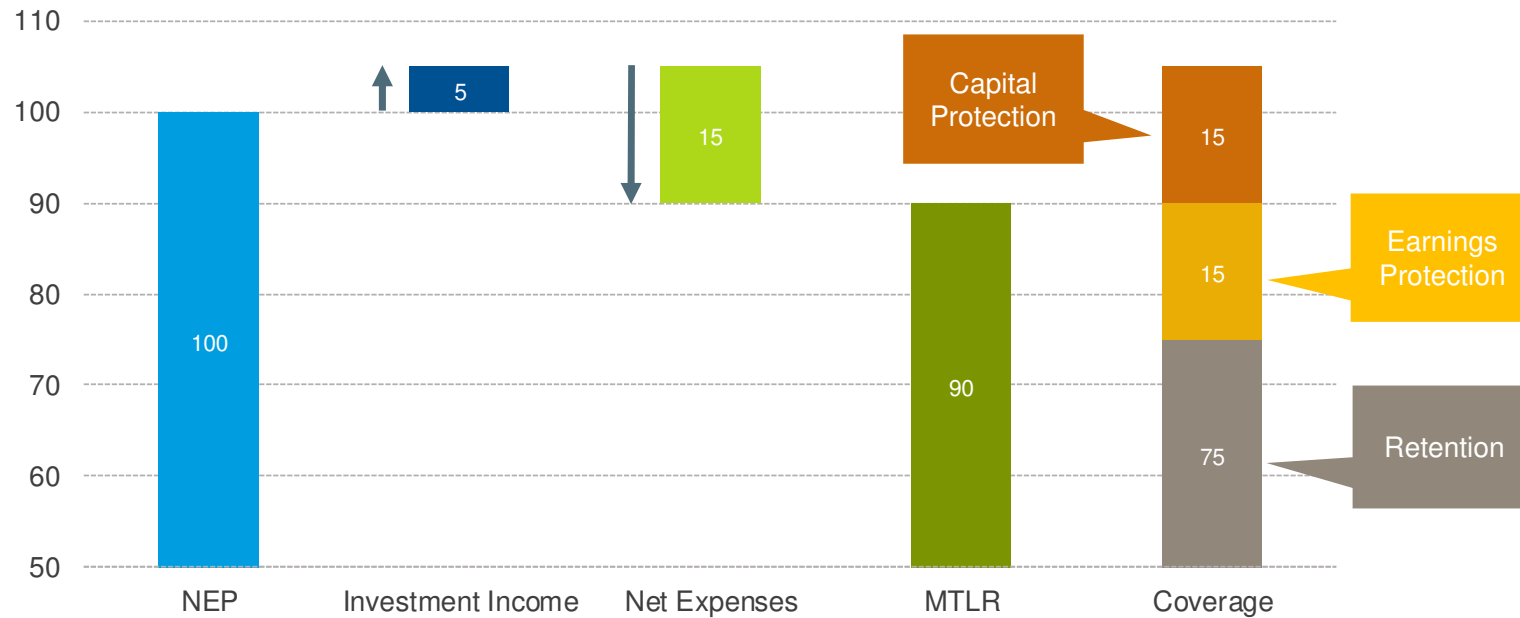over 3-year horizon
after AXL: EUR 30m

Over 3 years, net increase of EUR 9m in premium / EUR 30m in exposure

Case 3 – Protection of the Captive's Net Loss Ratio
European logistics company

**Stop Loss** – Expected loss μ = 70 with σ = 10 in percent of Net Earned Premium (NEP)

Retention of 75% for earnings protection / 90% for capital protection

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Case 4 – Capital Protection for the Captive (1/2)
Global energy company

- Captive's portfolio consists of several LoB[1] with a total annual premium of USD 45m

- Coverage is provided for a pre-defined number of (re-) insurance policies (first / sublayers)

- Possible scenarios:

  ✓ Total loss in one LoB is not affecting the capital.

  ✗ Clash in several LoB leads to a loss of capital.
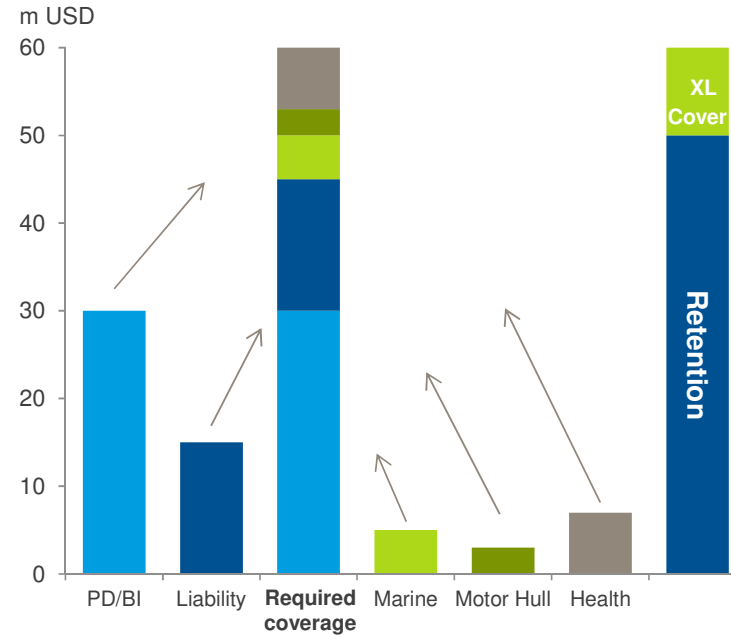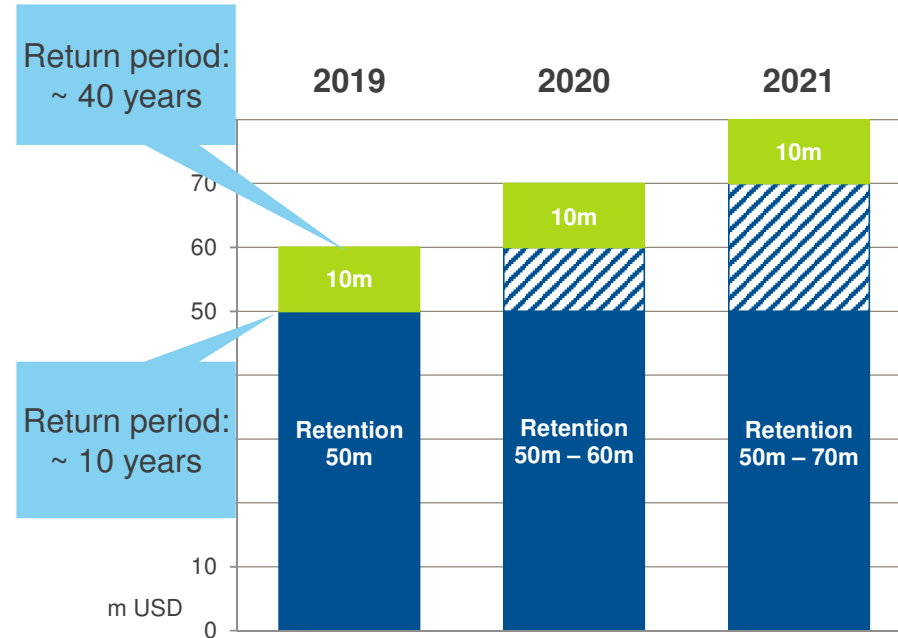

1) Line(s) of Business

The client is looking for an efficient Clash AXL to protect its capital

# Case 4 – Capital Protection for the Captive (2/2)
Global energy company

- Client's wish to protect the capital against a high frequency / severity of claims arising from several LoB
- Retention depends on ceded losses in previous years (adjustment factor: 100%)

Multi-Line Multi-Year AXL with loss-sensitive retention to protect the capital

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Case 5 – Clash Cover
Large industrial company
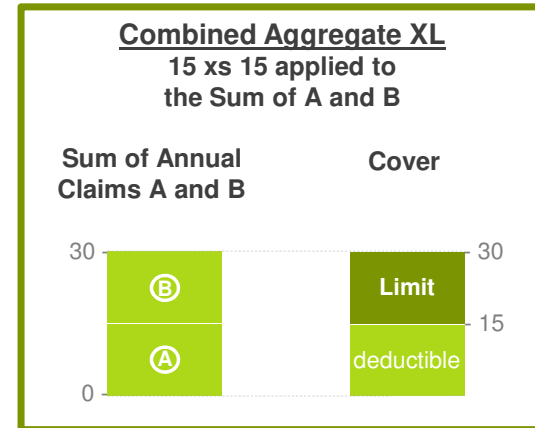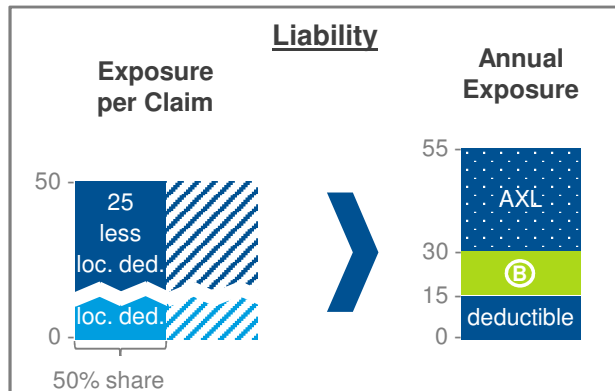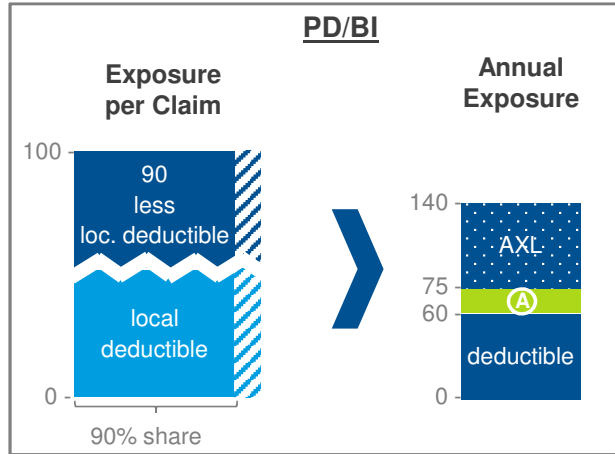
Figures in EUR million

Agenda

Hypotheses - Stop Loss
Multi-year whole account stop loss on accident year basis
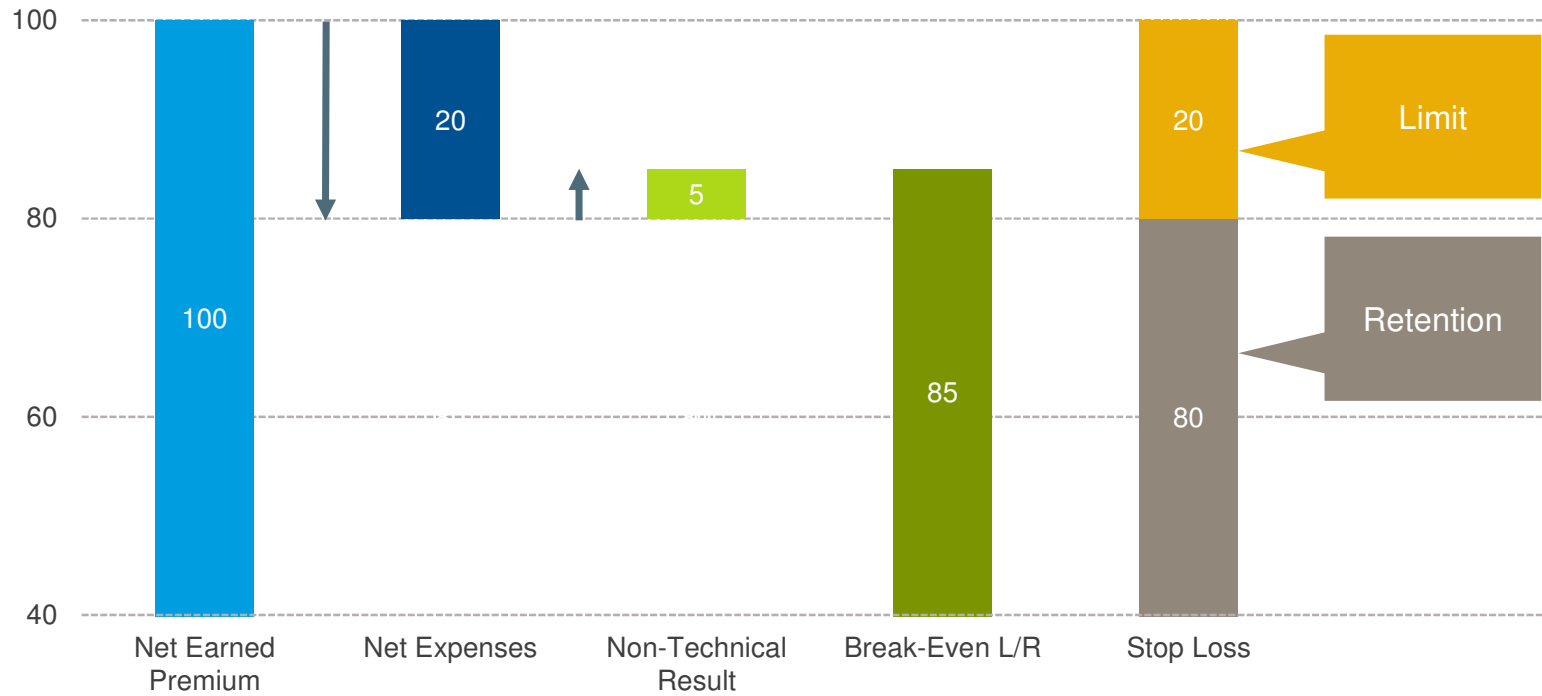
Stop Loss protecting the annual result

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Term Aggregate Deductible (TAD)
Multi-year whole account stop loss on accident year basis

Efficient capital management by defining multi-year risk appetite via TAD

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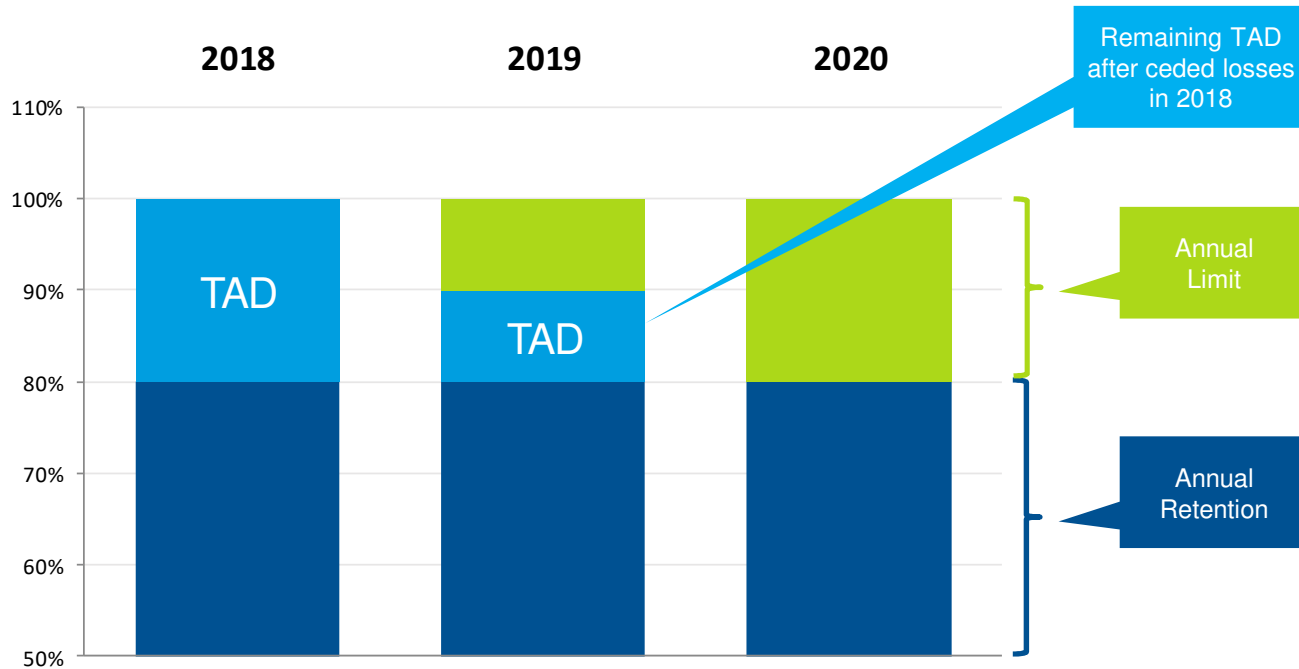# Numerical example
Managing equity efficiently

Example terms	
Term	3 years
Annual Limit	20%
Annual Retention	80%
Term Aggregate Limit	20,000,000
Term Aggregate Deductible (TAD)	20,000,000
Annual Premium	1.0%
Profit Commission	Nil
Net Earned Premium	100,000,000

Figures in USD

Over the multi-year Term,

1x Annual Limit
is retained as own risk
&
1x Annual Limit
is protected by the Stop Loss

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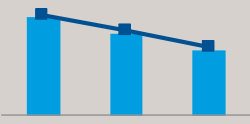
Scenario 1
The TAD is only partially consumed

Stop Loss	2018	2019	2020	Total
Net earned premium	100,000	100,000	100,000	300,000
Net L/R before stop loss	**90.0%**	**85.0%**	**80.0%**	**85.0%**
Annual Premium	1.0%	1.0%	1.0%	
Retention	80.0%	80.0%	80.0%	
Limit	20.0%	20.0%	20.0%	
Subject Loss (before TAD)	10.0%	5.0%	0.0%	
Ceded Loss (after TAD)	0.0%	0.0%	0.0%	
Net L/R after stop loss	**90.9%**	**85.9%**	**80.8%**	**85.9%**

Effect on the P&L Account	2018	2019	2020	Total
Annual Premium	-1,000	-1,000	-1,000	-3,000
Ceded Loss	0	0	0	0
Total	**-1,000**	**-1,000**	**-1,000**	**-3,000**

Term Aggregate Deductible (TAD)	2018	2019	2020	Total
TAD at the beginning of the year	20,000	10,000	5,000	20,000
Subject Loss	-10,000	-5,000	0	-15,000
Ceded Loss	0	0	0	0
TAD at the end of the year	**10,000**	**5,000**	**5,000**	**5,000**

Allocated capital
(own risk assumed)

Figures in USD '000 for 100%

The loss activity remains within the pre-defined risk appetite

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Scenario 2
Two loss-intensive years

Stop Loss	2018	2019	2020	Total
Net earned premium	100,000	100,000	100,000	300,000
Net L/R before stop loss	**100.0%**	**80.0%**	**100.0%**	**93.3%**
Annual Premium	1.0%	1.0%	1.0%	
Retention	80.0%	80.0%	80.0%	
Limit	20.0%	20.0%	20.0%	
Subject Loss (before TAD)	20.0%	0.0%	20.0%	
Ceded Loss (after TAD)	0.0%	0.0%	20.0%	
Net L/R after stop loss	**101.0%**	**80.8%**	**80.8%**	**87.5%**

Effect on the P&L Account	2018	2019	2020	Total
Annual Premium	-1,000	-1,000	-1,000	-3,000
Ceded Loss	0	0	20,000	20,000
Total	**-1,000**	**-1,000**	**19,000**	**17,000**

Term Aggregate Deductible (TAD)	2018	2019	2020	Total
TAD at the beginning of the year	20,000	0	0	20,000
Subject Loss	-20,000	0	-20,000	-40,000
Ceded Loss	0	0	-20,000	-20,000
TAD at the end of the year	**0**	**0**	**0**	**0**

Aggregate Loss ceded to the Reinsurer

Figures in USD '000 for 100%

Capital protection in excess of the pre-defined risk appetite

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