Willis Re MANAGING EXTREMES

STRUCTURED REINSURANCE REFRESHER

CARe Seminar 2015, Philadelphia

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Willis Re MANAGING EXTREMES

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AGENDA

Willis Re MANAGING EXTREMES

Why structured reinsurance?

What makes it "structured"?

Some things to consider

Examples

Why structured reinsurance?

- Risk tranching
- Efficiency
- Bridging expectation gaps
- Only tool available
- When the old solutions don't fit

Capital Alternatives

Equity → **Debt**

Common Stock	Preferred Stock	Subordinated Debt	Mezzanine Debt	Senior Debt	Trade Financing

- Management has a spectrum of alternatives to choose from when capitalizing an enterprise
- Not just form, but term, conditions, etc.
- For insurance companies, reinsurance is often viewed as a capital substitute.

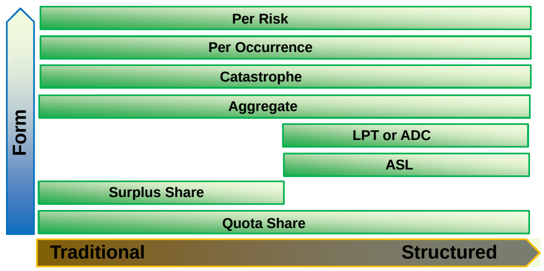
Reinsurance Alternatives

Reinsurance

Quota Share	Surplus Share	Aggregate	Catastrophe	Per Occurrence	Per Risk

- Same choice applies to reinsurance, but closest capital analogy is not with respect to form.
- Funding alternatives differ by degree of participation in the risk of the entity
- Structured reinsurance adds this dimension

Reinsurance Alternatives



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Reinsurance Alternatives

	Efficiency	Earnings Volatility	Capital management	Other
Rationale / Client motivation	§ Budget § Less swapping § Optimization – buy only what you need	§ Avoid surprises § Secure low funding costs for future growth § Stabilize R/I expenses	§ Reduce risk capital requirements § Support share buy-backs § Enable M&A activities	§ Reserve increases, bad winters, retrocession covers, growth strategy, … § Customized features
Possible Solutions	§ Introduce AAD § Multi-line top-layers (short-tail or long-tail) § Multi-line bundlers or aggregates § Top and Drops, Top and Gaps	§ Multi-line aggregates, 2nd /3rd event covers § Quarterly protections § Double trigger (u/w) based solutions § Overall aggregate covers	§ Multi-year Nat Cat top-layer or QS § Multi-year structured QS § Loss portfolio transfers / ADCs § Combination of QS and Cat Aggregates	§ Client specific demand driven solutions § LPT/ADC/QS package § Combination ILW and Cat Aggregate § ILS-Reinsurance Combo

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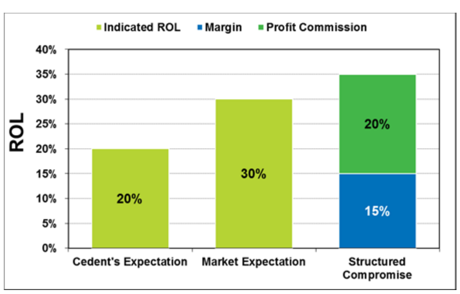
Bridging expectations



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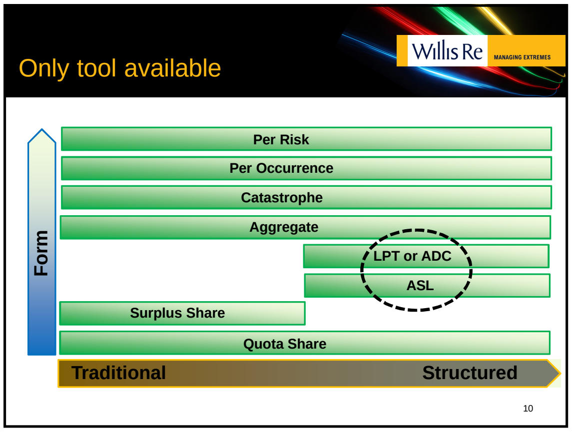

What makes it "structured"?

- A discussion of the general characteristics of these transactions

"Structured Re" is NOT a Product

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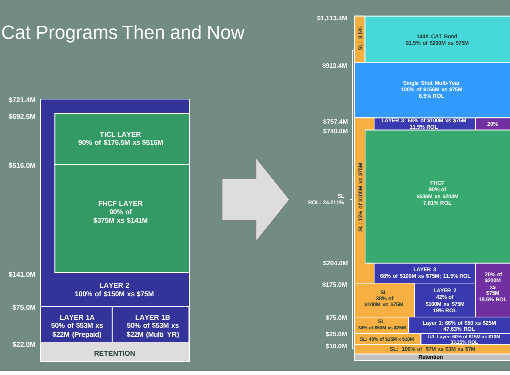
Cat Programs Then and Now



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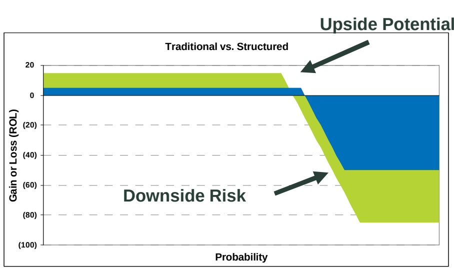
Spectrum of Cost/Risk Combinations



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Seeking efficiencies by blending risks
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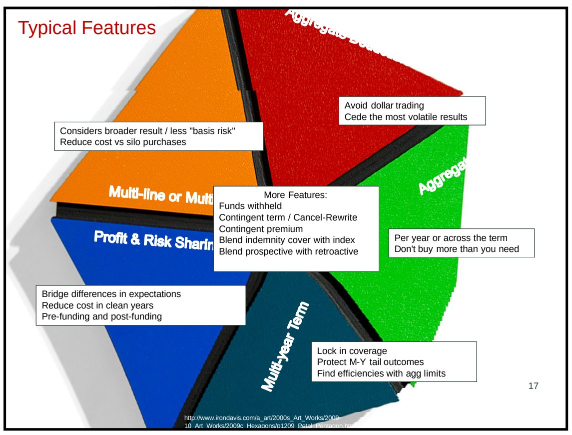
Typical Features
Avoid dollar trading
Cede the most volatile results
Considers broader result / less "basis risk"
Reduce cost vs silo purchases
More Features:
Funds withheld
Contingent term / Cancel-Rewrite
Contingent premium
Blend indemnity cover with index
Blend prospective with retroactive
Per year or across the term
Don't buy more than you need
Bridge differences in expectations
Reduce cost in clean years
Pre-funding and post-funding
Multi-year Term
Lock in coverage
Protect M-Y tail outcomes
Find efficiencies with agg limits
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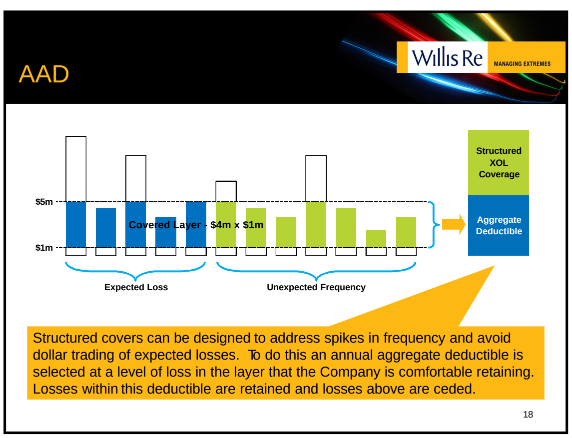
AAD
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Structured XOL Coverage
Aggregate Deductible
$5m
$1m
Covered Layer - $4m x $1m
Expected Loss
Unexpected Frequency
Structured covers can be designed to address spikes in frequency and avoid dollar trading of expected losses. To do this an annual aggregate deductible is selected at a level of loss in the layer that the Company is comfortable retaining. Losses within this deductible are retained and losses above are ceded.
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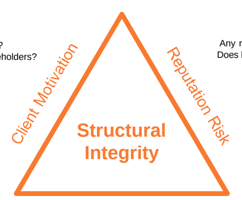
Some things to consider

- Assessing the soundness of the structure
- Risk Transfer – refresher

Assessing the soundness of the structure

What is driving the purchase?
Have we considered all stakeholders?
Why this alternative?

Any regulatory, accounting, or tax issues?
Does buyer need surplus relief or surplus?
Is regulator/auditor aware?
Pass the WSJ test?



Alignment of Interest / Robustness of Structure

Are the incentives correct in all possible scenarios?
Do we suffer and celebrate together?
Have we tested robustness of model/assumptions?

Risk transfer testing

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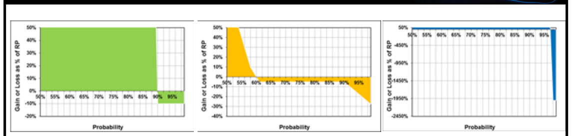


Highly Structured
- Passes 10/10 – 10% Loss at 90th percentile

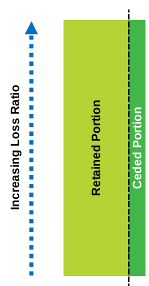
High Frequency/Low Severity
- Fails10/10 – Loss at 90th percentile less than 10%

Low Frequency/High Severity
- Fails10/10 – No loss at 90th percentile

All three would pass ERD

EXAMPLES

Traditional Quota Shares



- Traditional quota share contracts put the reinsurer in an equal relationship with the cedant
  - Flat ceding commission
  - Reinsurer shares in the results with the cedent
- Traditional quota shares represent an economic partnership between the cedant and reinsurer and may require significant due diligence depending on the nature of the business reinsured and the amount of risk assumed

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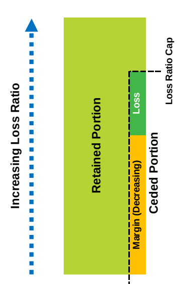
Surplus Relief Quota Shares



- What if you're just seeking surplus relief rather than an economic partner?
- Surplus Relief Quota Shares are designed to:
  - Provide the required surplus relief to the cedant
  - Allow the cedant to share in the profit of the ceded business if results are favorable

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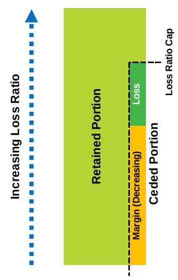
Surplus Relief Quota Shares



- Common features of Surplus Relief Quota Shares include:
  - Loss Ratio and Occurrence Caps
  - Sliding Scale Ceding Commissions
  - Profit Commissions
- The sliding scale ceding commission feature provides the reinsurer with a fixed "margin" over a range of outcomes
- The provisional cede is set at the expected loss ratio and varies based on actual results

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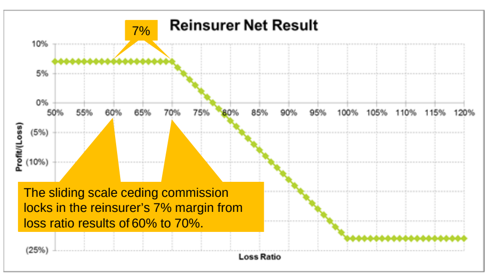
Example – Sliding Scale



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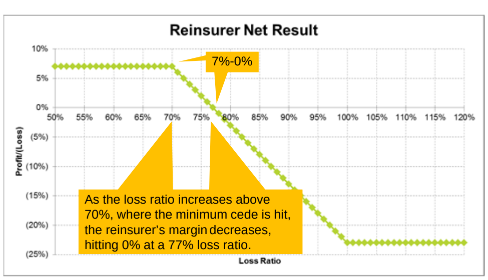
Example – Minimum Cede



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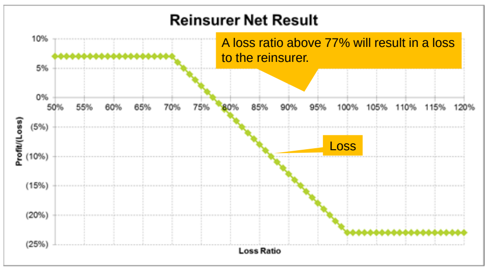
Example – Reinsurer Losses



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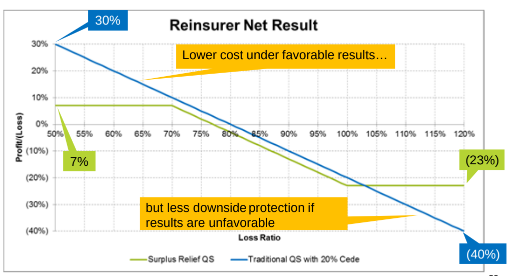
Comparison to Traditional



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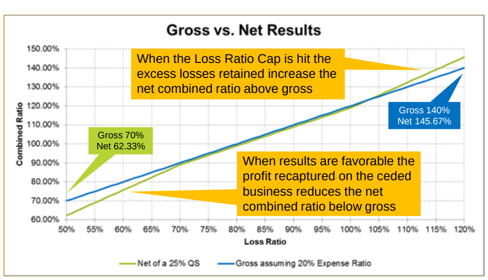
Effect on Net Combined Ratio



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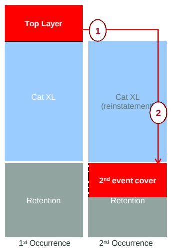
Top 'n Drop

Strategic positioning of an efficient property catastrophe purchase

Top 'n Drop Features:

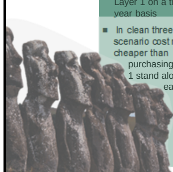
- One Shared Limit
- Limit is available when needed for severity events or frequency events
- Achieve lower costing due to sharing of limit and min. ROL requirements
- Horizontal protection when competitors are suffering from losses



Multi Year Cat Cover: Low Layer 1

More efficient purchase over multiple years

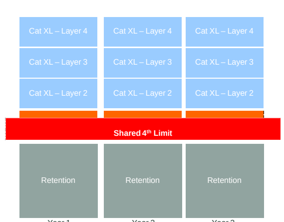
- Multi Year Lower Cat Layer
- Can be constructed with three limits and a three year profit commission
- Allows insurer to take some exposure to Layer 1 on a three year basis
- In clean three year scenario cost much cheaper than purchasing Layer 1 stand alone each year



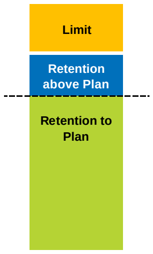
Multi Year Cat Cover: Low Layer 2

More efficient purchase over multiple years

- Three year Layer 1 cover
- Each year provided one stand alone limit
- Additional limit available for multiple occurrence years
- Additional limit shared across three years



ASL



- An Aggregate Stop Loss (ASL) is a prospective reinsurance structure that can:
  - Protect against surplus loss
  - Reduce earnings volatility
  - Manage retentions
- ASLs attach and provide coverage based on the cedant's overall net loss ratio
- All other reinsurance programs; per risk coverage, excess of loss coverage, etc., inure to the benefit of the ASL

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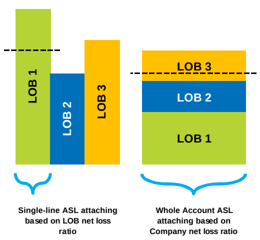
ASL



- ASLs can cover single or multiple lines
- Single-line covers (e.g., WC only) are best at addressing specific concerns and are the easiest to execute
- Multi-line or "Whole Account" ASLs are better at addressing general concerns (e.g., earnings volatility, surplus loss) and offer several advantages
  - If the covered lines are non- or only weakly correlated the diversification benefit can reduce the cost of coverage
  - Allows sharing of coverage between lines so less limit is required

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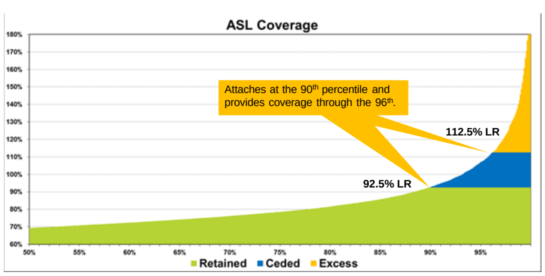
ASL parameters



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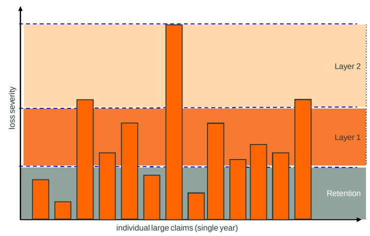
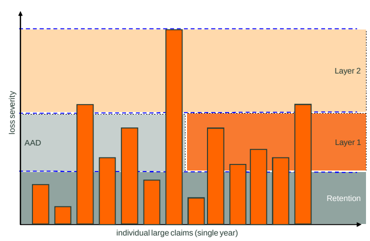
First Layer Frequency Cover:
Manage sideways exposure to frequency losses



Classic View:

- Insurer sets retention level per claim
- Buys layer excess of loss reinsurance
- For instance:
  - Layer 1: 500k XS 500k with unlimited reinstatements
  - Layer 2: 1m XS 1m with two reinstatements

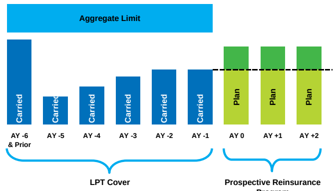
First Layer Frequency Cover:
Manage sideways exposure to frequency losses



New View:

- Annual Aggregate Deductible with respect to Layer 1 losses
- Reduces "dollar trading" in the layer
- Keeps level of severity protections unchanged
- Still protects net result against adverse frequency situations

Retroactive covers



- Loss Portfolio Transfers ("LPTs") and Adverse Development Covers ("ADCs") are *retroactive* reinsurance covers –they provide protection against losses that have already occurred
- Used by companies exiting a line of business or geographic region to provide a degree of closure and assurance to stakeholders regarding future results

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Retroactive covers

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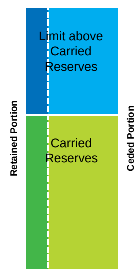
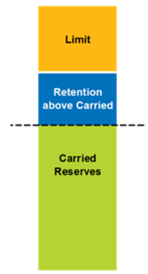


- An LPT acts like a Quota Share with respect to prior AY reserves
- An ADC acts like an Aggregate Stop Loss with respect to prior AY reserves



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Questions?

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