



Reinsurance Structures and Pricing Pro-Rata Treaties

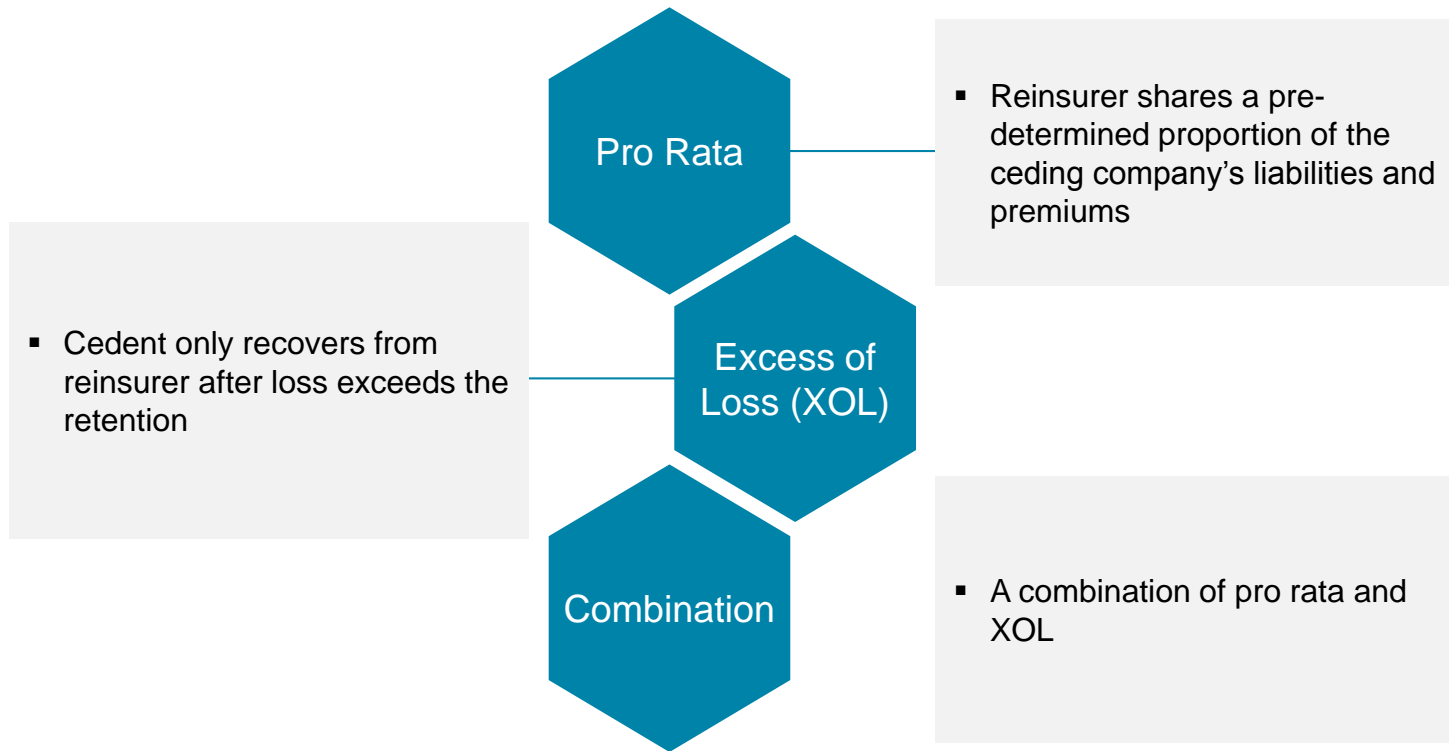
August 14, 2019

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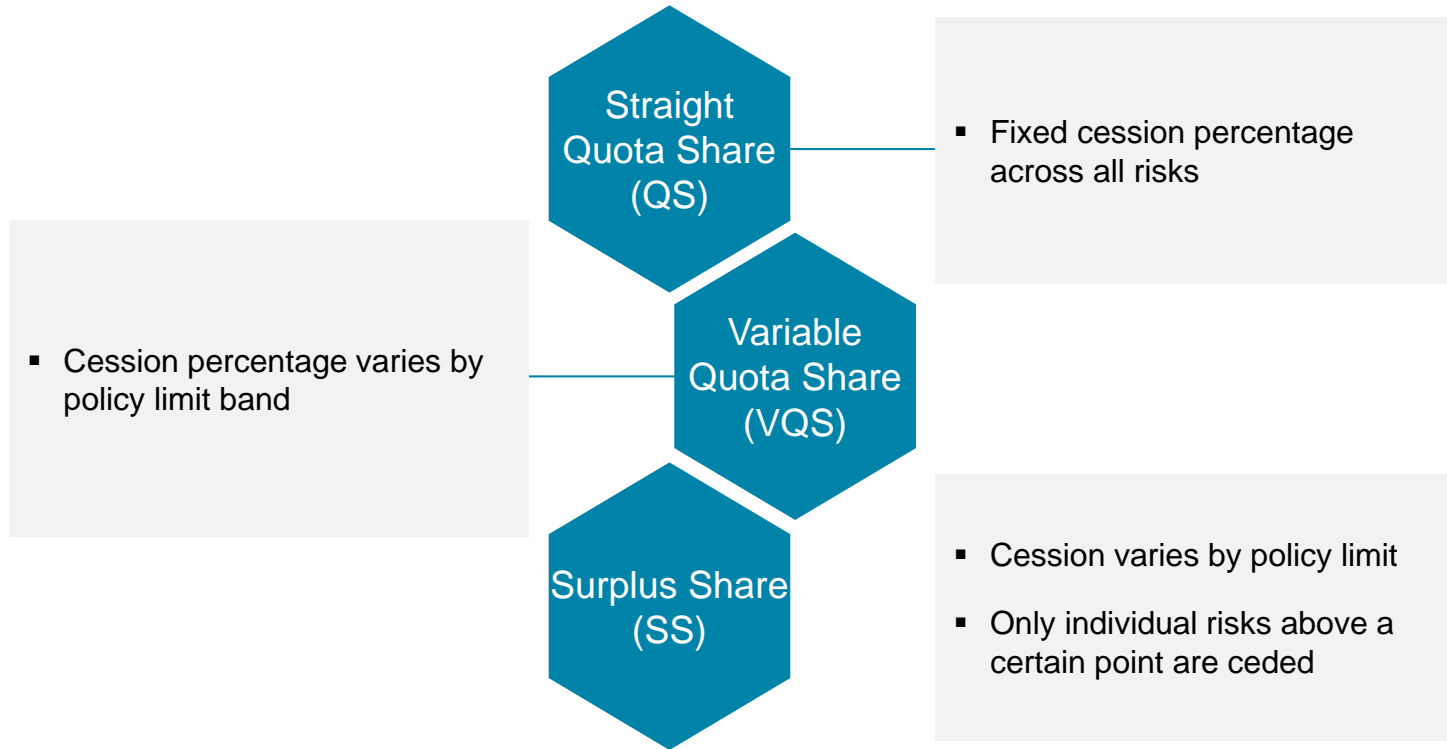
Motivations for Purchasing Reinsurance



Types of Treaty Reinsurance



Proportional Reinsurance



'Straight' QS Example

	(1)	(2) = ELR x (1)	(3)	(4) = (1) x (3)	(5) = ELR + (3)
Basis	Written Premium	Expected Losses	Expense Ratio / CC	Expenses	Expected Combined Ratio
Gross	100,000	60,000	25%	25,000	85%
Ceded [to Reinsurer] *	70,000	42,000	28%	19,600	88%
Net [to Cedent]	30,000	18,000	18%	5,400	78%



60% Expected Loss Ratio (ELR)
25% Expense Ratio

70% Ceded
28% Ceding Commission (CC)

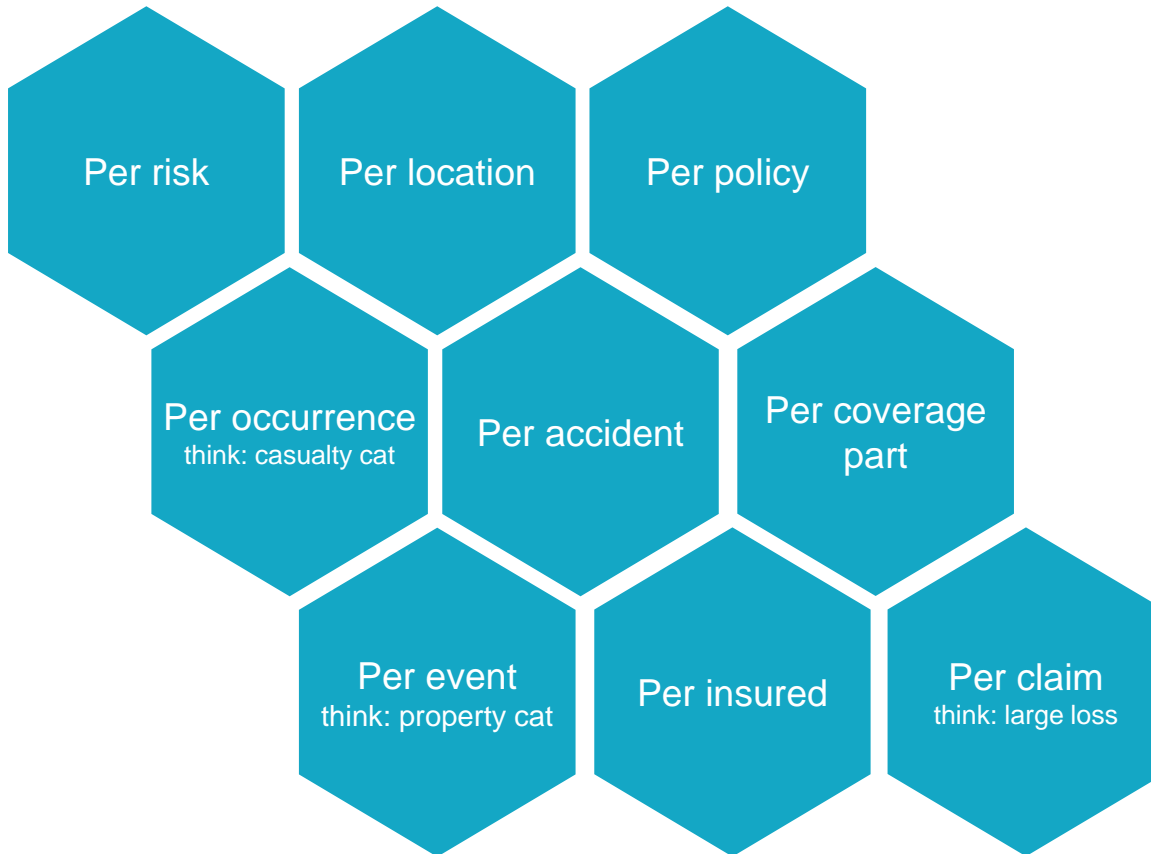
* The Ceded Combined Ratio displayed for the Reinsurer is prior to brokerage and internal expenses

Excess of Loss Reinsurance

- Cede losses above a specified retention up to a specified limit, e.g. \$1.5m xs \$0.5m
- Cede premium based on either:
 - Negotiated % rate of subject premium
 - Cessions rated, typically with ILFs



Types of Excess of Loss



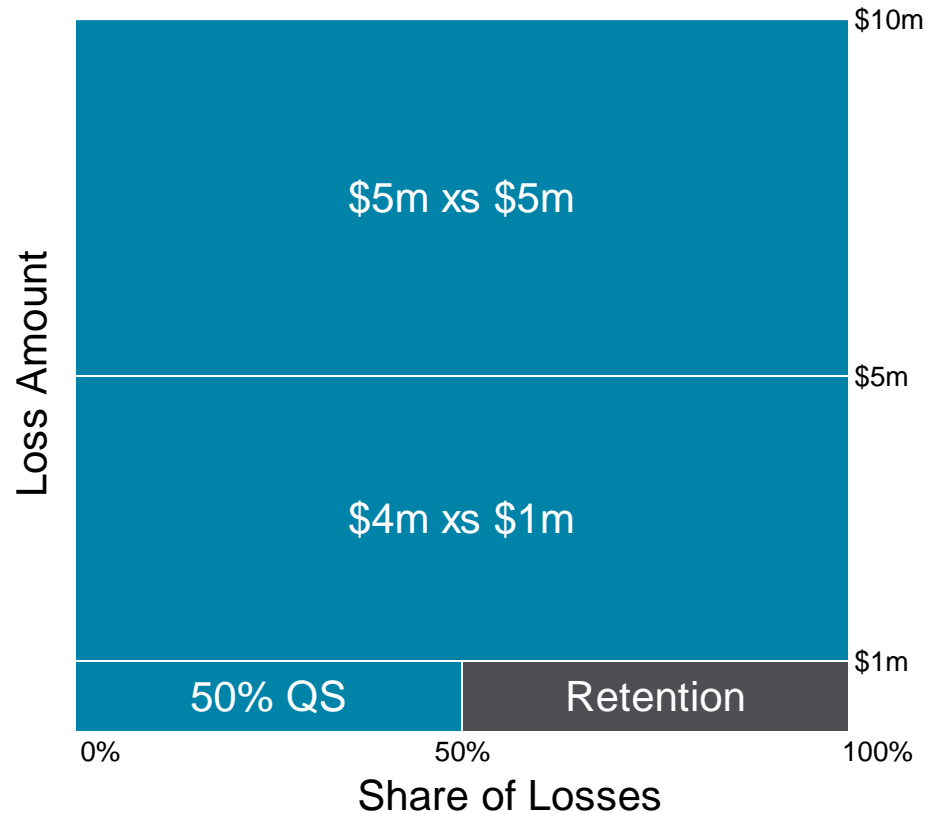
Combo Structure: Vertical/Stacked

XOL stacked on top of QS

- QS up to a certain limit
- XOL layers on top

Example

- 50% QS up to 1m
- \$4m xs \$1m
- \$5m xs \$5m



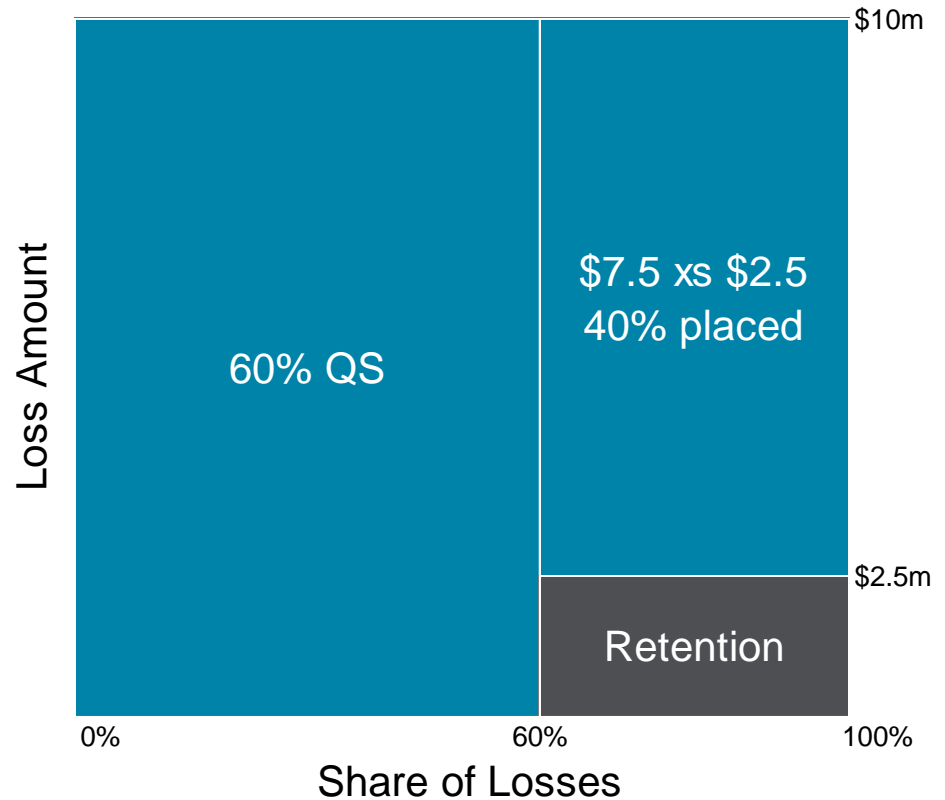
Combo Structure: Horizontal/Side-by-Side

Standalone QS and XOL contracts

Example:

Subject policies up to 10m:

- 60% QS
- 40% placed \$7.5m xs \$2.5m XOL



Experience Rating

Goal:

- Project the experience of the prospective treaty period

Method:

- Start with historical ground-up loss and premium information
- Adjust premiums and losses to prospective treaty period level
 - On-level premiums
 - Trend premiums and losses
 - Develop losses to ultimate

On-Leveling Premium

Essentially same as in primary pricing analysis:

- Rate changes (not premium changes)
- Exposure trend

Components of Rate Changes

Base rate changes

ILF changes

Loss Cost Multiplier (LCM) changes

Schedule mod changes

Renewal rate monitor

Monitoring of new business

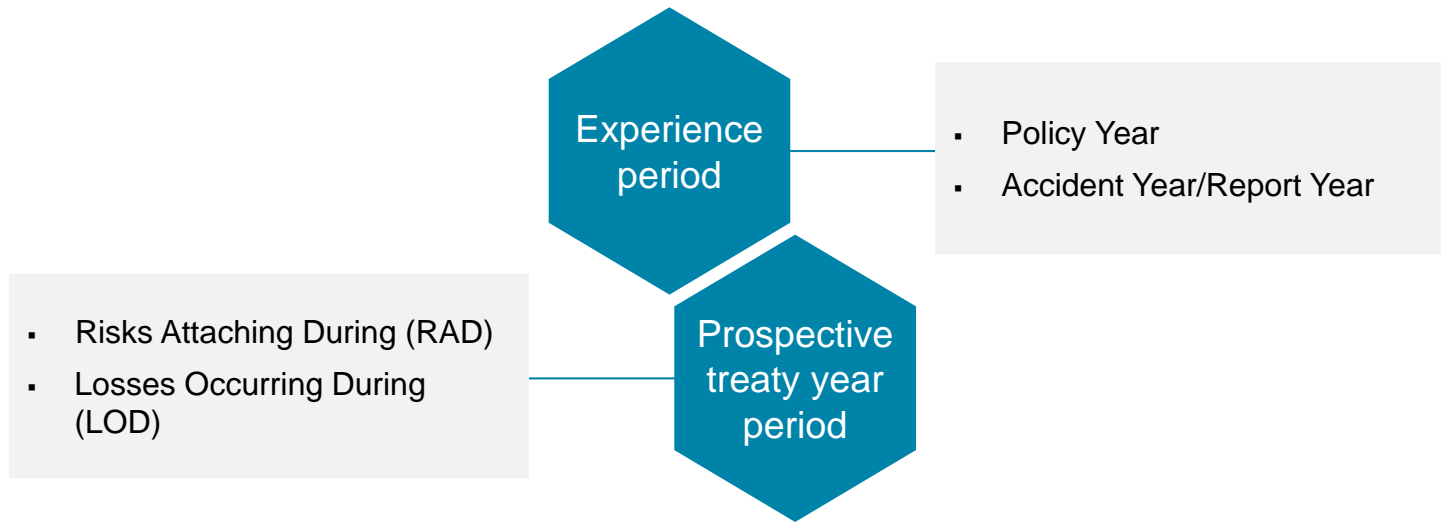
- Deviation from 'manual'
- Comparison to rates charged on renewals

Losses

Essentially same as in primary pricing analysis:

- Develop losses to ultimate
- Trend losses from average accident date in each experience period to average accident date in treaty period

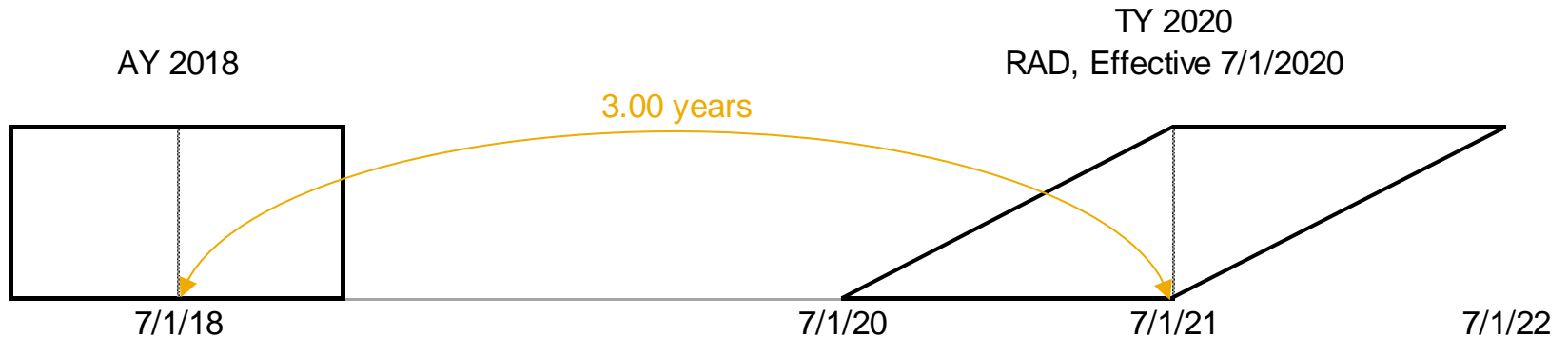
Premium and Losses – Data Basis



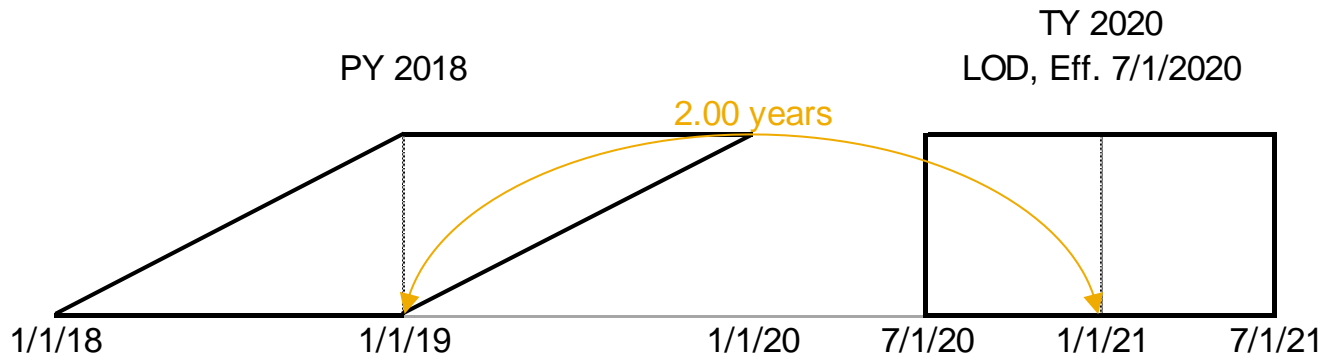
> Experience period and treaty period, typically a 12-month block

Trending Example Diagrams

Trending from Accident Year to Risk Attaching Treaty Year



Trending from Policy Year to Loss Occurring Treaty Year



Mix of Business Changes

- Subdivide historical experience into relevant homogeneous segments
 - e.g., by state, class, business unit, etc.
- Project a loss ratio for each segment
- Weight projections on prospective treaty year premium

How to Select Experience Period



- Premium volume by year
- Maturity of the experience
- Limits and attachment points of the business
- Any changes in the book (with respect to the items above, other types of mix changes, and changes in management)
- Quality of the information

Catastrophes and Large Losses

Limit large losses and remove cats from the experience

Load the expected large and catastrophe losses back


Model the load

- For property cat business, use one of the cat models
- For other lines, model via an exposure rating model
- Compare modeled load to long-term historical average and make a selection

Start-ups and Limited Data

Potential items to assess:

- Analyze experience from management's former company
- Assess rating plan and rating factors as well as their business plan
- Compare rates to similar companies
- Assess pricing via an audit
- Analyze industry performance

 Any comparison to another company should make an attempt to convert the benchmark company to an apples-to-apples basis (with respect to rate level, class mix, etc.).

Start-ups: Other Considerations

Underwriting cycle

- Consider the current state of the underwriting cycle

Business plan

- Evaluate business plan and its realistic likelihood of success

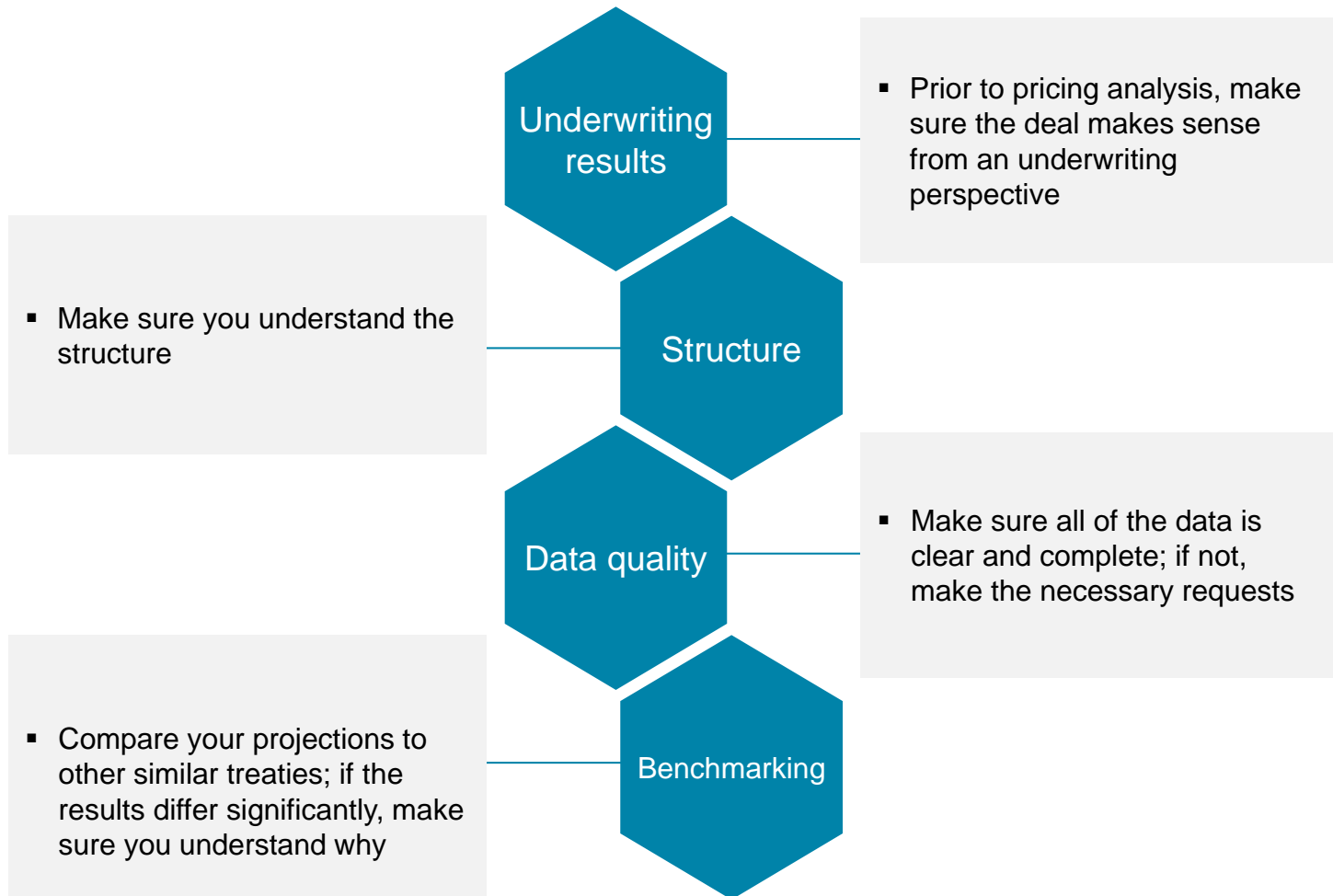
Risk appetite

- Amount of risks retained by cedent

Market competition

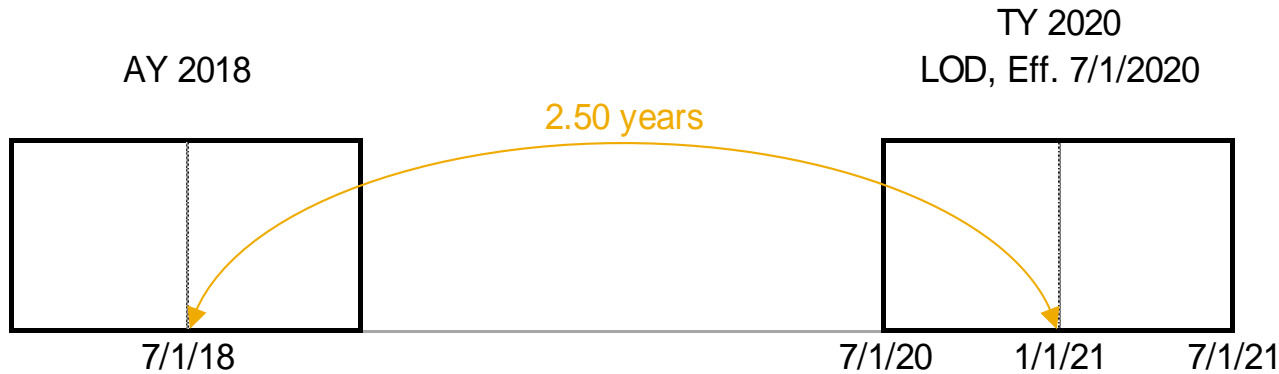
- Current market share
- Number and size of the competitors
- Ability/plan to obtain business from competitors other than based on price

Final Thoughts



Additional Trending Example Diagrams

Trending from Accident Year to Loss Occurring Treaty Year



Trending from Policy Year to Risk Attaching Treaty Year

