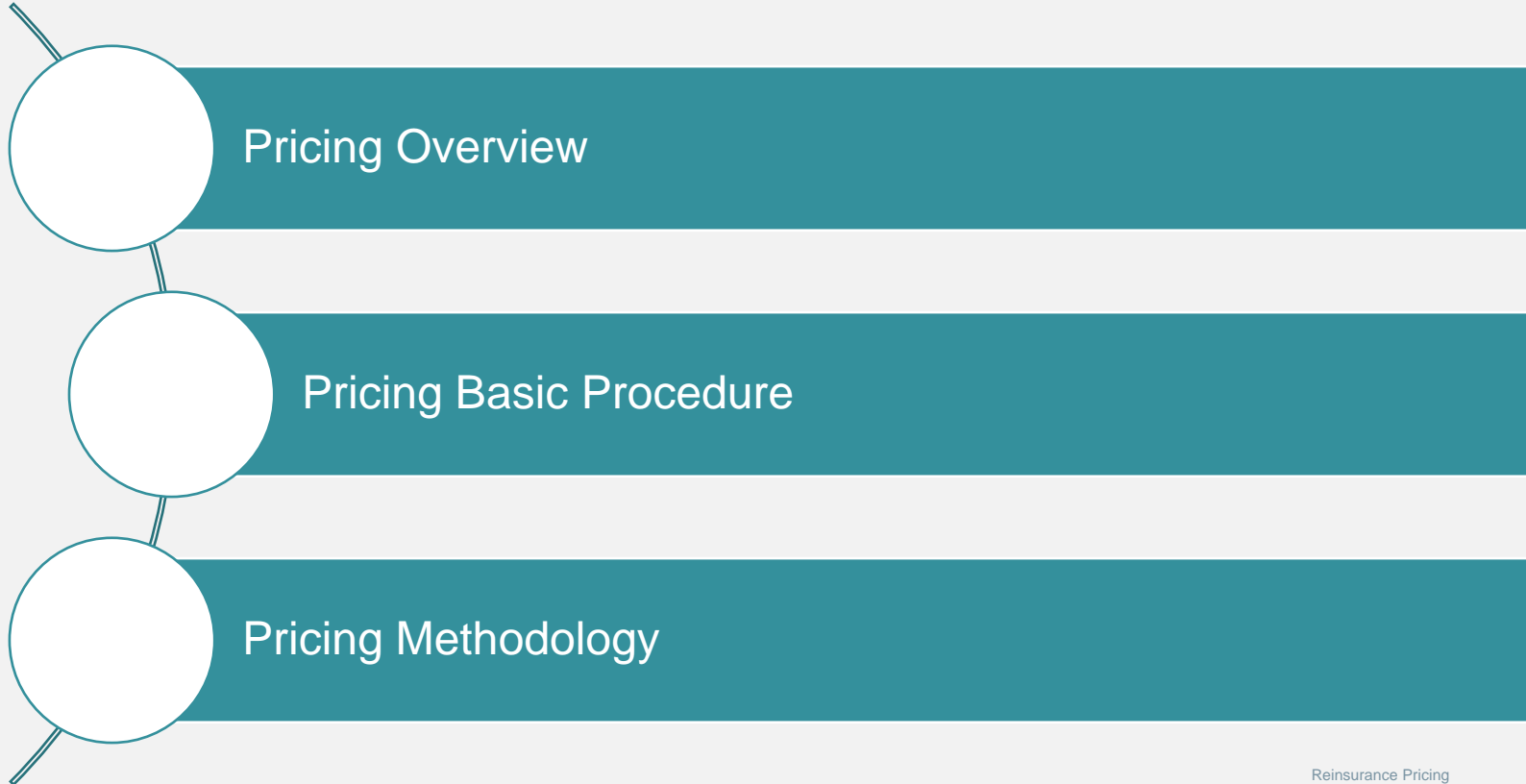


Reinsurance Pricing - Introduction

12.9.2023
Heike Klein

Munich RE 



1

Pricing Overview



Proportional treaties

Primary insurer:

- Calculates premium including acquisition and administration costs



RI

Proportional treaties

Primary insurer:

- Calculates premium including acquisition and administration costs
- Cedes part of the original premium, including the portion attributable to costs to the reinsurer.



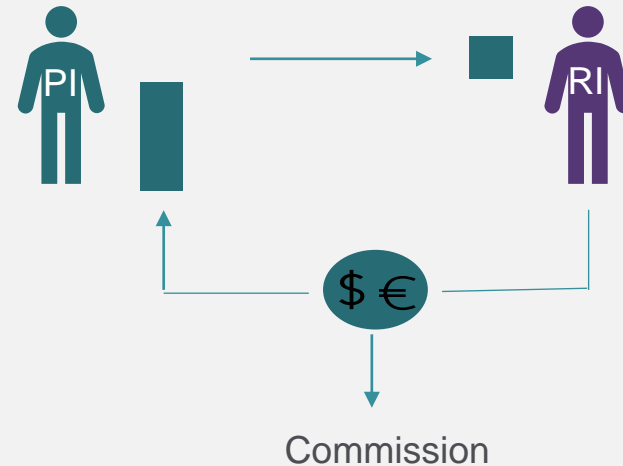
Proportional treaties

Primary insurer:

- Calculates premium, identifying the related acquisition and administration costs
- Cedes part of the original premium, including the portion attributable to costs to the reinsurer.

Reinsurer:

- Reimburses the costs via commission
- Follows the fortunes of the cedant



Non - Proportional treaties

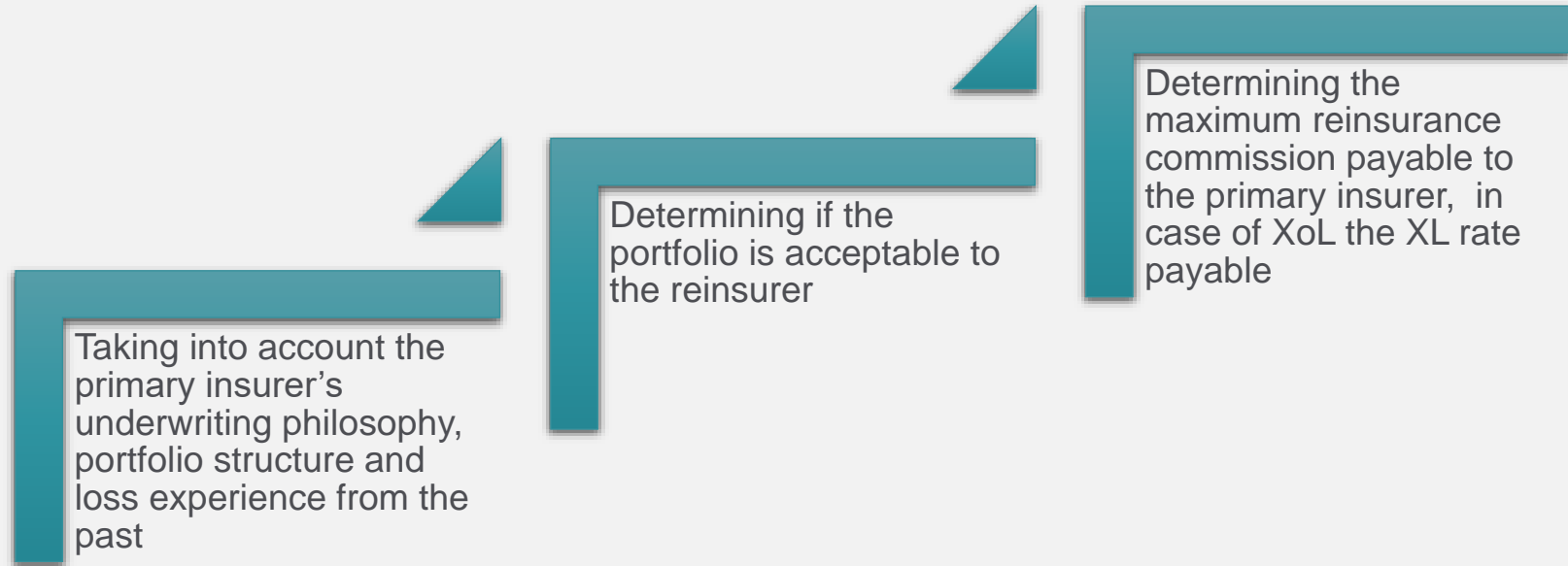
Primary insurer:

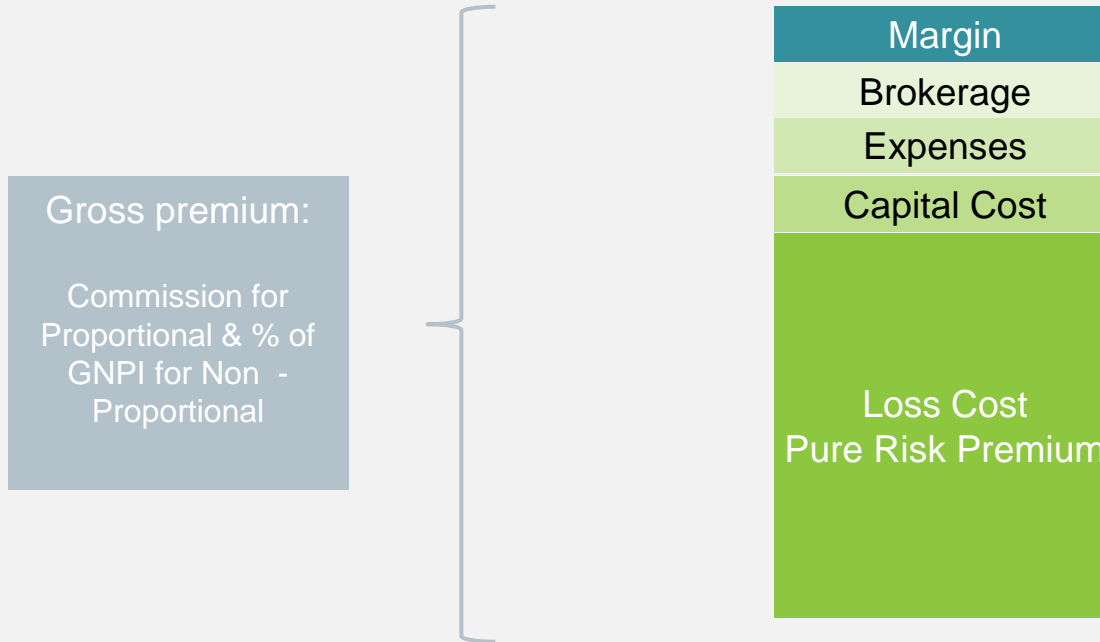
- Pays upfront premium
- Fixed % of the Gross Net Premium Income (GNPI)
- Minimum and deposit premium is often applicable

Reinsurer:

- Charges the rate at which they are willing to accept the losses in excess of the clients retention
- Pays losses in excess of the clients retention

Reinsurer and Primary Insurers account is different



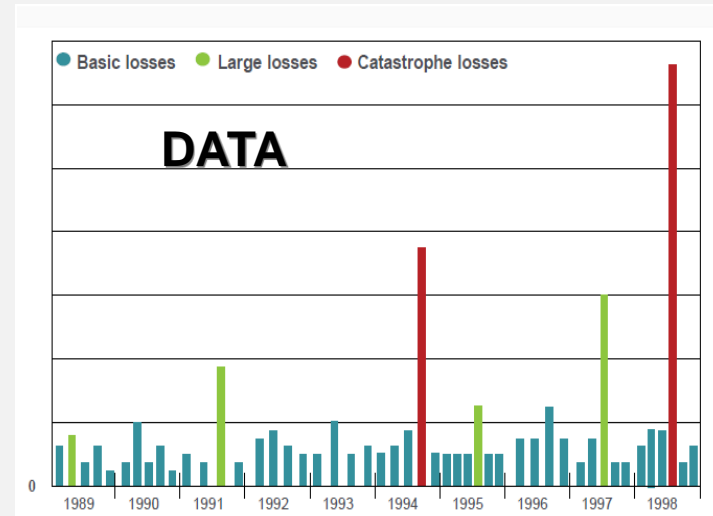


2 Pricing Basic Procedure

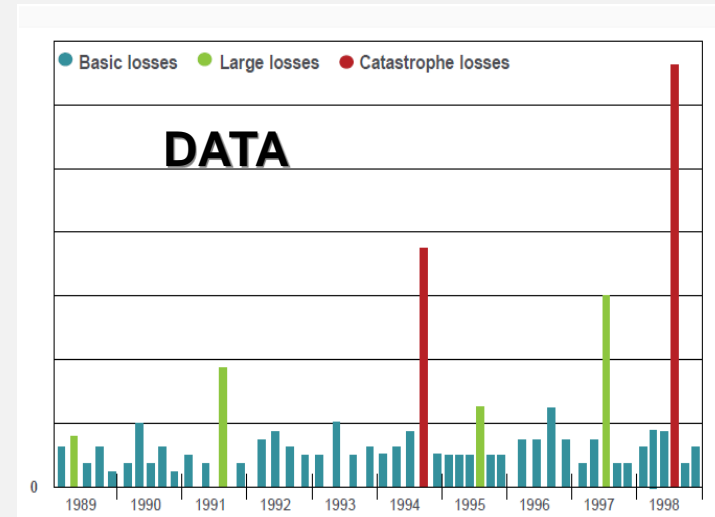


- **Collect data**
- Check and analyze data
 - Plausibility checks
 - Initial analysis
- Group data
- Adjust data
 - Indexation
 - Projection and development
- Pricing model
- Check results

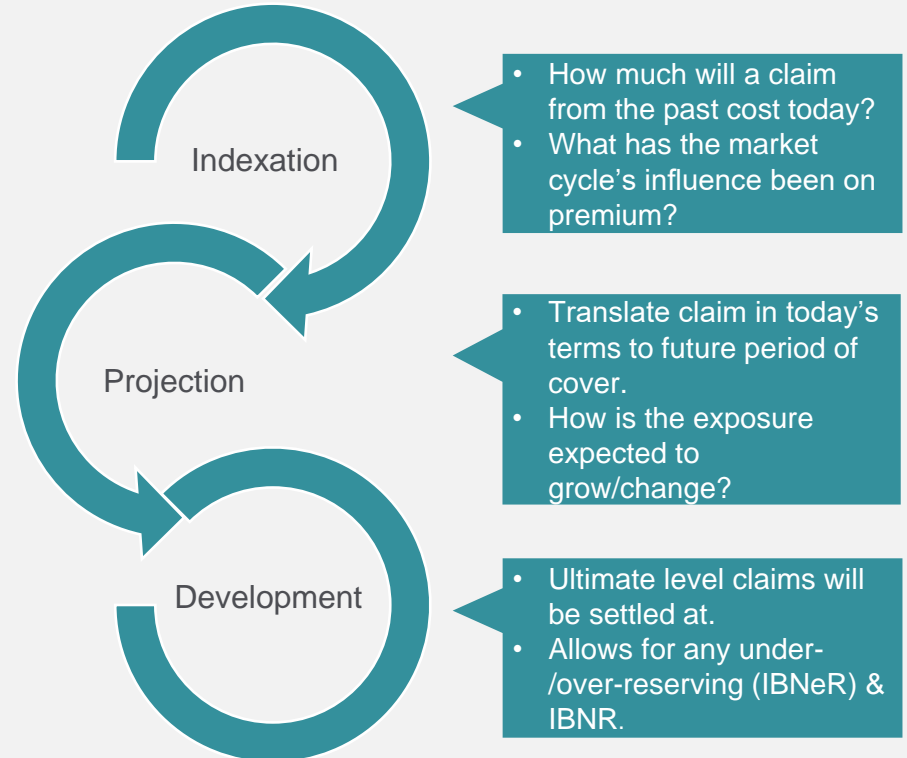
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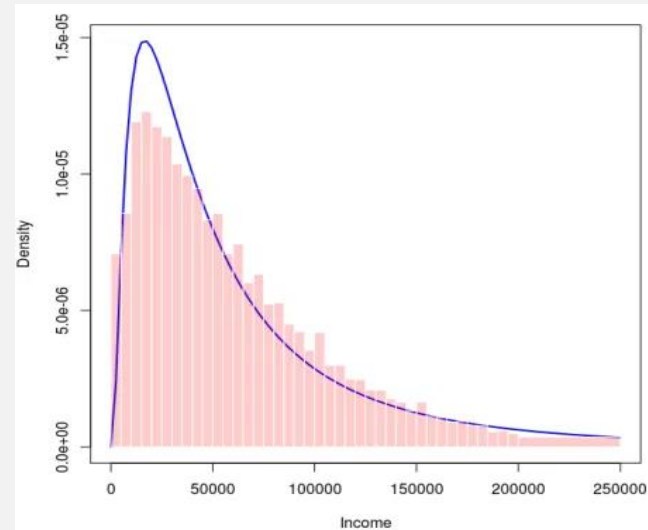
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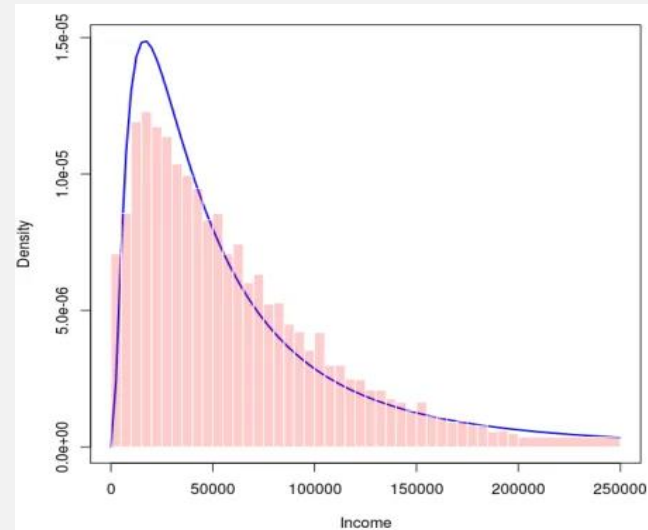


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source: <https://www.r-bloggers.com/modeling-incomes-and-inequalities/>

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Basic Losses

- Low severity and high frequency
- Every day partial losses

Large Losses

CAT Losses

Basic Losses

Large Losses

CAT Losses

- High severity and low frequency
- Single large losses
- Losses in excess of a value
- Guide is the loss notification

Basic Losses

Large Losses

CAT Losses

- **Very high** severity with **very low** frequency
- Accumulation of losses
- Earthquake, flood, conflagration, cyber

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3 Pricing Methodology



Proportional

- Price for Basic Losses, Large Losses and CAT Losses
- Assessment of overall Loss Ratio
 - Actuarial techniques (e.g. Chain Ladder Method)
- Experience Rating
 - Burning Cost
 - Collective Model (Frequency-Severity)
- Exposure Rating

Non-proportional

- Price for Large Losses and CAT Losses
- Experience Rating
 - Burning Cost
 - Collective Model (Frequency-Severity)
- Exposure Rating