

My Ceding Company's Data is Not Credible, So NOW What Do I Do?

Personal Lines

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Note to Self: Do not run screaming from the room.

Public Speaking Fears

So what exactly are people afraid of when it comes to public speaking?

- 1) 'Drying up' or not being able to speak.
- 2) Forgetting what you are talking about – your mind going blank.
- 3) Having the heckler from Hell.
- 4) Having someone in the audience who knows more than you do.
- 5) People noticing that you are nervous.
- 6) Having to run screaming from the room.
- 7) The presentation being so awful and embarrassing that your social/career relationships are forever ruined.
- 8) The impossible to answer 'question from Hell'.
- 9) The audience talking over you or walking out
- 10) Dying on stage (OK, so we made this one up to make it up to 10 :-)

Source: http://www.uncommon-knowledge.co.uk/public_speaking/fears.html

The Credibility of Ceding Company Personal Lines Data Varies Significantly

Rating Assumption

- Primary price trend
- Loss trend
- Loss development factors
- Expected loss ratio
- Severity curve

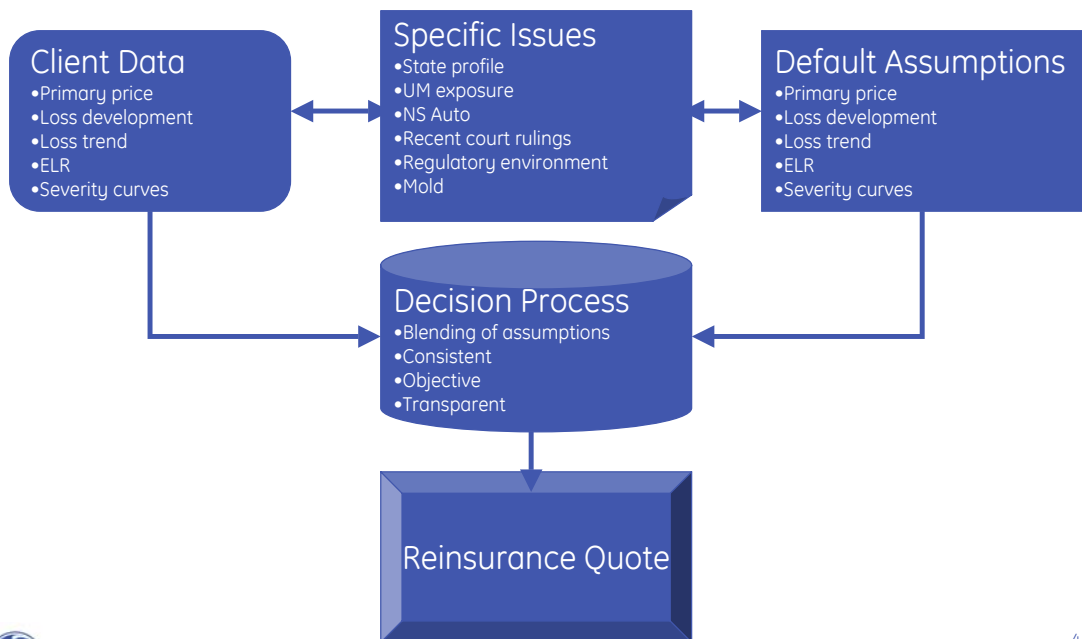
Potential Issue

- “The dog ate our filed rate changes.”
- Low credibility of underlying data
- Low credibility in excess layer
- Limited annual volume, history
- Curve selection, ALAE treatment



- Primary price data for personal lines should be more readily available and less subject to changes in individual risk rating compared to commercial lines. It may take some effort to translate a large number of rate changes by product line and state into suitable input for the treaty pricing model.
- For smaller companies it may be difficult to evaluate underlying frequency and severity trend. Underlying loss trend, such as decrease in frequency, may not necessarily translate to large claims and excess layers.
- Company excess loss development may be very sparse or difficult to interpret. Some inference about company loss development can be made by comparing a lower layer or ground up limited layer to default assumptions for same layer.
- The expected loss ratio may include or exclude ALAE. This is an input for exposure rating of excess treaties, or the main profitability estimate for proportional treaties. The correct interpretation of ALAE may occasionally be an issue for treaty pricing.
- Exposure rating personal auto liability may require a method for mapping premium at split limits to corresponding occurrence limits.

External Data Sources are Essential for Reinsurance Pricing of Personal Lines



- Default assumptions may be developed for various state groupings
 - Tort vs. No Fault
 - ISO Commercial Auto Groups
 - Selected Stand-alone states (mold, etc.)
- Default assumptions may be developed for market segments
 - Regional writers
 - National or Specialty writers
- Company or state specific issues should be considered
- State specific issues may be particularly important for regional writers
- Consistent decision process should be followed for blending client data with default parameters in pricing model

There are Various Sources for Industry Data Related to Personal Lines

- NAIC Annual Statement Databases
- ISO Reinsurance Package
- ISO Personal Lines Data
- PCI Greenbook
- The Internet (Insurance Information Institute)
- Company Rate Filings
- Reinsurer Treaty Pricing Data
- Reinsurer Reserving Data



- This is a comprehensive but not complete list of sources with data related to treaty pricing parameters.
- Monetary costs of accessing these resources vary considerably, from free to purchasing product licenses at significant expense (\$100,000 range)
- Additional costs to fully utilize these resources can be very significant.
 - Training, learning curve.
 - Internal analyses, reports and recommendations.
 - Developing templates and treaty pricing tools.
- Significant initial investment in time and resources, reduced in future years.

NAIC Annual Statement Databases

- Source: Providers include OneSource and A.M. Best
- Description: Industry annual statement data. Includes Schedule P, IEE, Page 14 state data, Schedule F.
- Availability and Cost: Available soon after statement filing deadlines. Cost varies significantly depending on specific products purchased.
- Uses
 - > Loss and ALAE development, gross loss and ALAE ratios, experience by state, direct expenses (and many more)
 - > Experience summarization available at various levels: total industry, set of companies (peer group, segment), individual company
- Limitations
 - > Net loss development only
 - > Booked loss ratios
 - > Difference between DCCE and ALAE
 - > Mismatch between annual statement line and treaty subject
 - > Property issues



- Net loss and ALAE development
 - Can be used as indication for “limited” loss and ALAE development pattern
 - Can be used to restate booked ultimate net loss ratios
 - Need algorithm to restate booked ultimate gross loss ratios
- Booked gross loss and ALAE experience
 - Booked ultimate net loss is restated using selected loss development factors
 - Booked ultimate gross loss is restated based on restatement of net
 - Restated ultimate gross losses are trended
 - Premium is adjusted to current level
 - Trended adjusted loss ratios, DCCE ratios, used as input for Exposure Rating
- Property issues
 - Non-cat ELR for proportional treaty or excess treaty (Exposure)
 - CMP Schedule P line
 - Aggregate 10 year experience for 2 year lines
 - Need catastrophe experience on same basis from company
 - Experience by line on CY basis for 6 years. Same catastrophe issue.

ISO Reinsurance Package

- Source: ISO Reinsurance Package
- Description: PSOLD, MILD, Excess LDFs for Comm'l Auto, GL, and HO II
- Availability and Cost: Electronic format. Cost significant
- Uses
 - > LDF: by loss layer, loss limit, ALAE treatment (pro-rata, included)
 - > LDF: incurred and paid loss, reported and paid counts
 - > Frequency and severity analysis
 - > Severity curves
- Limitations
 - > Very limited personal lines data in package (HO Section II excess loss)
 - > Commercial data may be applied if significant adjustments made



- Personal AL excess layer loss development
 - Commercial AL LDF higher than personal AL LDF for given layer
 - Apply relativity based on GU factors to Comm AL layer LDF?
- HO Section II excess layer loss development
 - Available every 2 years
 - Losses exclude LAE
- MILD and PSOLD Severity Curves
 - No Personal AL, HO Section II, or HO Property curves currently provided

ISO Reinsurance Package Future Enhancements

- PSOLD Plus (Homeowners)
 - > Functionality similar to commercial product
 - > Market share 37%
 - > Very few losses excess of 1 million
 - > HO and Condo forms can be split
- Personal Auto Liability Occurrence Database
 - > No per claimant detail
 - > Losses inclusive of ALAE and PIP, net of S&S
 - > Data not trended or developed



- PSOLD Plus Homeowners
 - Available June 1
 - Standalone HO or Commercial Product, or combined
 - Can run only Building+Contents+Time Element combined
 - Limit profile should be coverage A
 - Data from 1991 to 2003
 - Can run including or excluding Cats
 - Construction type brick, frame, both
 - Can run net and gross of deductible
 - Protection class detail to be added (soon)
- Personal Auto Liability Occ Database
 - Currently losses include per accident limits, not per person
 - Includes per person limits (just added)
 - Limit detail will be complete for BI limits. PD limits may be missing if no PD loss
 - Two years of untrended and undeveloped losses (AY 1999 and 2000)
 - ISO has no specific plans to provide severity curve parameters or develop ILF
 - State provided

ISO Personal Lines Data

- Source: ISO Personal Lines Actuarial Service
- Description: Actuarial Service circulars, Fast Track, customized data
- Availability and Cost: Electronic format. Cycle varies by product. Cost is significant
- Uses
 - > Loss development (ground up only)
 - > Frequency and severity trend statistics
- Limitations
 - > Requires purchase of Personal Lines license from ISO
 - > No excess loss development (See Reinsurance Package for HO Section II)



- Fast Track includes companies reporting to ISO, PCI, NISS
 - Homeowners – Latest year direct earned premium reported 24.8 Billion (2003)
 - Paid frequency, severity, pure premium (average loss per house year)
 - Direct by policy form including cats. Excluding cats (all forms combined)
 - Countrywide and by state
 - Personal Auto – Latest year direct earned premium reported 53 Billion (Liability excluding Physical Damage)
 - Paid frequency, severity, pure premium (average loss per car year)
 - Direct by coverage (BI, PD, PIP, Collision, Comprehensive)
 - Countrywide and by state
- Actuarial Service circulars (premium trend, loss trend, loss development, loss experience)

PCI Greenbook

- Source: Property Casualty Insurers Association of America (formerly NAII)
- Description: Compilation of property/casualty insurance industry statistics
- Availability and Cost: Annual report. Cost free to members of PCI
- Uses
 - > Historical experience by line.
 - > Claim cost indices
 - > Private Passenger Auto Statistics: Premium trend, loss trend, accident statistics, economic statistics
- Limitations
 - > Statistics are generally high level
 - > Statistics derived mostly from other sources such as NAIC, ISO, A.M. Best.
 - > May not provide much additional information if other sources already evaluated.



- PCI Greenbook is a good source of high level statistical data for Personal Auto Liability
- These statistics are generally available from the original sources given time, money and resources
- This source is most helpful if you do not have access to other sources or have limited resources to utilize other sources
- Obtaining the data from the original sources greatly increases understanding of the data and flexibility in application to treaty pricing models.

The Internet Insurance Information Institute

- Source: Public website (www.iii.org)
- Description: Periodic reports on market conditions and trends for various product lines. References to reports and studies from other organizations
- Availability and Cost: Useful information freely available
- Uses
 - > Premium trends
 - > Loss trends
 - > Tort system costs and potential benefits of reform
- Limitations
 - > You get what you pay for
 - > Generally high level information. Need to consider company and state specific issues.
 - > Much of the information is compiled from other sources already listed
 - > May require additional analysis and adjustment as input for rating parameters



•Facts and Statistics

- Homeowners insurance: Costs, loss trends, cause of loss, market statistics
- Auto insurance: Costs, market statistics, loss trends
- Highway Safety: Various accident statistics

•Hot Topics – Various special reports

- Homeowners and auto insurance costs outlook
- Tort costs and reform advocacy

The Internet

NAMIC (Nat'l Assn of Mutual Ins Cos)

- Source: Public website (www.namic.org)
- Description: Similar to Insurance Information Institute in type of content. Useful source for information on state laws and regulations impacting personal lines.
- Availability and Cost: Free information. May require free registration.
- Uses and Limitations: See Insurance Information Institute
 - > Premium trends
 - > Loss trends
 - > Federal and state laws and regulations
 - > Tort system costs and potential benefits of reform

Reinsurer Treaty Pricing Data

- Source: Internal data
- Description: Client and prospect original treaty data submissions (paper and electronic). Data stored in reinsurer treaty pricing systems.
- Availability and Cost: Depends on reinsurer treaty pricing systems. Useful information may reside in original submissions, including declined opportunities.
- Uses
 - > Primary price index
 - > Supplemental loss development information
 - > Gross expected loss ratios by product line
 - > Rating plan benchmarking
- Limitations
 - > Systems limitations
 - > May require significant effort and resources to compile data in useful format



- Treaty pricing data is a rich source of potential information for rating parameters
- There are significant practical limitations to fully utilizing this information.
 - Systems limitations
 - What information is captured electronically H
 - How readily can it be retrieved and summarized
 - Does the database require significant “scrubbing”?
 - What information is available outside of the electronic systems?
- A thorough inventory of information residing in current electronic and paper files could be beneficial.
 - Improve rating systems ability to store and retrieve internal data for enhanced rating parameters
 - Uncover potentially valuable information collected over time
 - Revisit information requirements for treaty pricing

Reinsurer Reserving Data

- Source: Reinsurer portfolio reserving data
- Description: Treaty loss and premium experience. Individual claim data. Summary data.
- Availability and Cost: Depends on reinsurer reserving systems.
- Uses
 - > Excess loss development factors
 - > Portfolio profitability reviews
 - > Total program profitability reviews
- Limitations
 - > May require significant effort and resources to compile data in useful format
 - > Limited treaty layer groupings (e.g., working, buffer, excess)
 - > Requires linkage between pricing and reserving functions



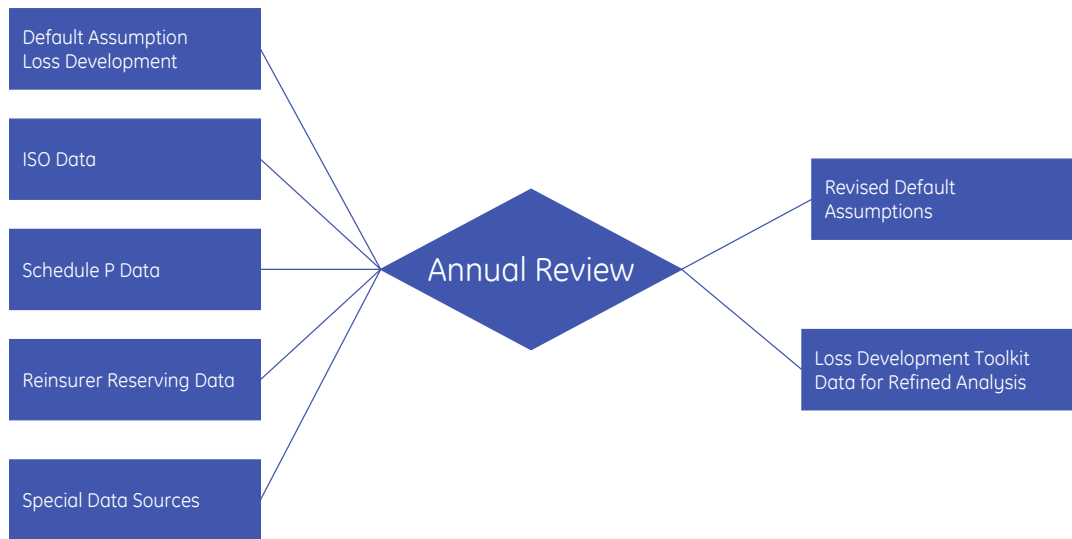
- The limitations on practical use of reserving data for rating parameters will vary widely between reinsurance companies
- Companies with more granular data and significant linkage between the pricing and reserving functions will find more opportunities to incorporate this information into analyses of rating parameters

Company Rate Filings

- Source: State DOI, company, vendor
- Description: Experience provided to support rate filings. Rating factors for benchmarking.
- Availability and Cost: Varies by DOI. Potentially costly exercise in time and resources.
- Uses
 - > Price changes. Market leaders in selected states.
 - > Loss development factors (typically ground up)
 - > Loss trend assumptions
 - > Historical experience and ELR assumptions
 - > ILF benchmarking and severity curves
 - > Benchmarking other rating factors
- Limitations
 - > May be difficult to obtain or unavailable in selected states
 - > Potential high cost and limited benefit. Need to carefully define scope of project
 - > Credibility and accuracy of data provided to support filings



Treaty Pricing Model Parameters Should be Reviewed Periodically



- Some data sources are not available every year
- Rating parameters may be reviewed on a staggered schedule
 - Critical parameters annually
 - Less critical parameters every two years (or so)
 - Special studies based on need
 - Emerging external or environmental issue (e.g., law change)
 - Emerging internal issue (e.g., adverse loss development)

Example: Personal Umbrella Quota Share Treaties

Experience review issues

- > Limited credibility (volume)
- > Rate changes and exposure trend
- > Loss development factors
- > Loss trends

Example: Personal Umbrella Quota Share Treaties

Dealing with limited credibility

- > Many accounts too small to experience rate
- > Default ELR
 - Rate filings for market leaders
 - Reinsurer portfolio analysis
- > Optimize client experience
 - B-F method
 - Limited loss ratio analysis
 - Large loss load based on exposure analysis
- > Credibility weight with Default ELR



•Default ELR

- Rate filings for market leaders may provide information on historical countrywide experience and actuarial assumptions for on-level ELR.
- Reinsurer can pool portfolio of personal umbrella treaties
 - Can use quota share data directly (adjust for share to 100%)
 - For excess treaties, obtain original gross data (for companies with most significant exposures)
 - Combination of internal and external data used for loss development factors, loss trends, premium adjustment factors.
- Standard pricing approaches may not work well for Personal Umbrella treaties
 - B-F approach for IBNR
 - Limit losses
 - Estimate large loss load from Exposure Rating.

Example: Personal Umbrella Quota Share Treaties

Rate changes and exposure trend

- > Rates may become “stale” on programs with small retentions (e.g., company ceded 95% of experience)
- > Rates may periodically need a tune up
- > Small companies may have difficulty providing accurate rate change data
- > Exposure base typically not inflation sensitive (0% exposure trend)

- Ceding company may not have much incentive to maintain adequacy of Personal Umbrella rates (e.g. retains 5% of first 1 million)
- Given the limitations on experience rating for many programs, you need an alternate plan for maintaining rate adequacy.
- Rates for most programs should be periodically reviewed and adjusted (indexed) regardless of any program specific experience issues.

Example: Personal Umbrella Quota Share Treaties

Rate Benchmarking Considerations

- > Basic premiums (1 car, 2 residences)
- > Minimum premiums
- > Per youthful operator charge
- > Underlying with another carrier
- > UM charges
- > Minimum attachments
- > Special risks (Swimming pools, farms, rental properties, RVs)
- > Emerging exposures (state issues, home business)

Example: Personal Umbrella Quota Share Treaties

Loss development factors

- > Individual company data typically not credible
- > Very limited public data
- > Rate filings for market leaders
- > Pooled loss development data from all Personal Umbrella treaties
- > Derive from Personal AL and HO Section II excess LDF studies



- Rate filings often include countrywide loss development factors
 - Useful data will be in market leader filings.
 - There may be little additional benefit from a broader survey of rate filings outside the market leaders.
- Pooled data for loss development study
 - Can use quota share data directly (adjust for share to 100%)
 - For excess treaties, obtain original gross data (for companies with most significant exposures)
- Personal AL and HO Section II excess LDF
 - Use factors developed for excess treaties over primary AL and HO liability exposures
 - Adjust factors as needed to reflect higher layers
 - Weight based on distribution of auto losses for Personal Umbrella

Example: Personal Umbrella Quota Share Treaties

Loss trends

- > Ground up Personal AL with leverage adjustment to reflect average attachment
- > Rate filings for market leaders
- > Tempered Commercial Umbrella assumptions
- > Commercial Auto Size of Loss data for Private Passenger Types



- Impact of layer on trend may be estimated in various ways for other lines. These relationships can be applied to Personal Umbrella.
- An alternative approach is to use ground up trend and experience rate the treaty using individual claim data. However, this requires an additional adjustment for trend bias for missing losses (losses not reported to the Personal Umbrella layer).
- Rate filings often include loss trend assumptions
 - Useful data will be in market leader filings.
 - There may be little additional benefit from a broader survey of rate filings outside the market leaders.
- Commercial Umbrella trend
 - Adjust for differences in ground up trend between Personal and Commercial AL
 - Adjust for differences in average attachment point and limit