


**Casualty Actuarial Society:
Casualty Loss Reserve Seminar**

Three Perspectives on Peer Review


Commitment Beyond Numbers



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Carrie Rice, CPA
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Agenda

1. Antitrust notice
2. About the presenters
3. Peer Review – procedures and ASOPS
4. Peer Review – methodology, selections and exhibits
5. Auditor’s perspective on actuarial conclusions



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Antitrust Notice

- The Casualty Actuarial Society is committed to adhering strictly to the letter and spirit of the antitrust laws. Seminars conducted under the auspices of the CAS are designed solely to provide a forum for the expression of various points of view on topics described in the programs or agendas for such meetings.
- Under no circumstances shall CAS seminars be used as a means for competing companies or firms to reach any understanding – expressed or implied – that restricts competition or in any way impairs the ability of members to exercise independent business judgment regarding matters affecting competition.
- It is the responsibility of all seminar participants to be aware of antitrust regulations, to prevent any written or verbal discussions that appear to violate these laws, and to adhere in every respect to the CAS antitrust compliance policy.



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About the Presenters



Erich Brandt
Senior Consulting Actuary
Pinnacle Actuarial Resources, Inc.

- CAS Fellow
- Illinois State University
- 22 years of experience
- Reserving studies for insurance companies, captives and self-insureds
- Experience includes:
 - Financial statement data reviews
 - Commercial and liability lines
 - Workers' compensation
 - Medical professional liability

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About the Presenters



Darcie Truttman
Consulting Actuary
Pinnacle Actuarial Resources, Inc.

- CAS Fellow
- B.A., M.S. Mathematics, Illinois College
- 14 years of experience
- Reserving studies for insurance companies, captives and self-insureds
- Experience includes:
 - Funding recommendations for emerging coverages
 - Commercial and liability lines
 - Workers' compensation
 - Medical professional liability

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About the Presenters



Carolyn Rice
Partner
Johnson Lambert LLP

- CPA
- B.A., M.S. Accounting, University of Vermont
- 20 years of experience
- 16 years experience auditing insurance companies
- Experience includes:
 - Alternative risk
 - Governmental risk pools
 - Commercial

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What is Peer Review?

- An evaluation of professional work product
 - Conducted by a qualified professional
 - Peer of the preparing actuary
- Perspectives differ as to peer review
- What are common peer review concepts and approaches in loss reserving?



Examples of peer review



- Are methods reasonable?
- Does it comply with ASOPS?
- Are the conclusions supported?
- Check calculations

Best Attributes of Peer Review

- Positive, not defensive
- Strong organizational support
- Evaluated by risk:
 - “Higher risk” vs. “lower risk”
 - Higher risk = more intensive review



Effective Peer Review

- Strong management commitment
- Reviewer and reviewee see as positive experience
- Underscore education
- Feedback is constructive
- Process given adequate priority
- Emphasize feedback and follow-through

Benefits of Peer Review

- Enhanced quality
- Compliance with ASOPs
- Learning through exchange of ideas
- Enhanced reputation
- Greater consistency of procedure and work product quality
- Error reduction




Discussion Question 1

- How many audience members participate in their company's peer review program?
- Do the programs have a checklist or prescribed steps?


CAS Code of Professional Conduct

1. An actuary shall perform Actuarial Services with skill and care
2. Material departures from ASOPs must be justified and documented
3. Actuarial communications are clear and appropriate
 - Right for intended audience
4. Work product shall not be used to mislead other parties
 - Specify limitations

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ASOP 36 – Statements of Actuarial Opinion

- Applies to work products regarding reserves
- Are the three dates identified?
- Are the reserve amounts identified?
- Stated basis of reserves
 - Discounted
 - Risk margin
 - Recoverable
 - What expenses are included in loss adjustment expenses?
- Has actuary made use of another’s work? Another actuary’s opinion?

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ASOP 43 – Unpaid Claim Estimates

- Identify intended purpose
- Identify constraints:
 - Data
 - Staff and/or time
- Nature of unpaid claims:
 - Coverage
 - Limits and reinsurance
 - Claims adjustment process
 - Conditions that may affect severity
- Are assumptions reasonable?

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ASOP 41 – Actuarial Communications - Report

- Identify:
 - Methods
 - Procedures
 - Assumptions
 - Data
- Another qualified actuary could make objective appraisal of reasonableness of work product.

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ASOP 41 – Actuarial Communications

- Identify responsible actuary and actuarial documents
- Necessary disclosures:
 - Scope
 - Cautions, reliances and limitations
 - Reliance on sources of data
 - Responsibility for assumptions and methods
- Be clear to minimize misinterpretation and/or misquotation
- Is potential variability of results adequately discussed

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Discussion Question 2

- What other standards of practice should an actuary be familiar with before peer reviewing an unpaid claim analysis?

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Other Standards of Practice

ASOP 1
Introductory
actuarial
standard of
practice

ASOP 20
Discounting

ASOP 23
Data quality

ASOP 21
Working with
auditors

ASOP 38
Models
outside the
actuary's area
of expertise

www.actuary.org



Other References


**AAA Law
Manual**

**COPLFR
Practice Note**

**Internal
Captive Law
Reference
Sheet**

**Annual
Statement
Instructions**

Peer Reviewing the Results




- Focus on unpaid claim estimates
- Exhibit or line/segment specific
 - Reviewing LDFs
 - Evaluation of methods
 - Ultimate loss selections
- Big picture
 - Do exhibits flow?
 - Are findings reasonable and supported?

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Peer Reviewing Loss Development Factors

- How do they compare to benchmarks?
- Are differences from benchmarks or triangles explained?
- Would other types of loss development analysis be of benefit?
 - Counts and averages
- Should other averages or diagnostics be added?
 - Average excluding low and high
 - Volume-weighted average
 - Three and five years averages



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Peer Reviewing Loss Development Factors


Loss Development Interval

Accident Year	Line A 12-24	Line B 12-24	Line C 12-24
2011	1.45	1.7	1.19
2012	1.18	1.45	1.21
2013	1.21	1.43	1.2
2014	1.7	1.18	1.21
2015	1.2	1.21	1.18
2016	1.19	1.2	1.43
2017	1.43	1.21	1.45
2018	1.21	1.19	1.7
Average:	1.321	1.321	1.321
Average Last 5:	1.35	1.20	1.39
Selection:	<input type="text"/>	<input type="text"/>	<input type="text"/>

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Evaluation of Development Methods

- Are assumptions and methods reasonable for this assignment?
- Are known biases in methods taken into account?
- If a BF method is used, is the a priori assumption appropriate?
- If only one method, is it adequate?
- Are loss adjustment expenses treated appropriately?



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Is the A Priori Appropriate?


Policy Period	Scenario 1			Scenario 2		
	Earned Premium	Selected Ultimate Losses	Indicated Loss Ratio	Earned Premium	Selected Ultimate Losses	Indicated Loss Ratio
2012	1,000,000	1,000,000	100%	1,000,000	750,000	75.00%
2013	1,500,000	1,000,000	66.67%	1,500,000	750,000	50.00%
2014	2,000,000	1,500,000	75.00%	2,000,000	750,000	37.50%
2015	2,000,000	1,500,000	75.00%	2,000,000	1,750,000	87.50%
2016	2,500,000	2,000,000	80.00%	2,500,000	2,000,000	80.00%
2017	3,000,000	2,000,000	66.67%	3,000,000	3,000,000	100.00%
Total:	12,000,000	9,000,000	75.00%	12,000,000	9,000,000	75.00%

Selected: 75.00%

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Peer Reviewing Ultimate Loss Selections

- Are final selections appropriate?
 - Lines of business and available data
 - Are loss dev methods over-reacting to large claim(s)?
- Compare subtotals or across policy periods
- Are differences between methods intuitive?



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Big Picture – Are Findings Reasonable?

- Is there negative IBNR?
- Can unusual loss ratios between lines be explained?
- Can unusual loss ratios between policy periods be explained?
- Any unusual observations in frequency or severity?

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Big Picture

- Do exhibits flow?
- Do findings make sense given diagnostics?
 - Expected vs. Actual
 - Compare from previous analysis
 - Comparisons of frequency / severity / loss ratios
- Are limits and reinsurance communicated and calculated correctly?

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Peer Reviewing the Results – Adjustments to Data

- Are differences between source and analysis data taken into account?
- Are there reconciliations between data provided and numbers in the analysis?
- Does the analysis adequately take reinsurance structure into account?



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Expected vs. Actual Example

Policy Period December 31, 2016 – December 31, 2017	Evaluation Date December 31, 2017	Reported Incurred Losses 500,000	Selected Ultimate Losses 1,000,000	Selected % of Ultimate 50%
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- Percentage of ultimate at 24 months of maturity from December 31, 2017 is 70%
- Based on our December 31, 2017 analysis, we can expect 40% of the unreported losses to be reported in calendar year 2018
 - $40\% = (70\% - 50\%) / (1 - 50\%)$

Unreported Loss as of December 31, 2017 500,000	Expected Loss Reported CY 2018 200,000	Actual Loss Reported CY 2018 250,000	Difference Over (+) Under (-) 50,000
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Audience Question – IBNR Proration

- Self insured has a July 1, 2018 to July 1, 2019 policy period
- How do you calculate IBNR as of December 31, 2018?
 - Ultimate loss \times $\frac{1}{2}$ - reported incurred loss *or*
 - Stub period ultimate loss - reported incurred loss
- How can you tell which is correct?
- What kind of feedback can a peer reviewer provide?


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SAO Disclosures

- Is the type of opinion correct?
 - Reasonable?
- RMAD
 - Are relevant risk factors disclosed?
 - Is there a change of significant material adverse deviation?
- Unusual IRIS Ratios
 - Does the prescribed commentary give enough detail?
- Relevant comments
 - Do these reflect the nature of the reserves and the annual statement?

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Questions?



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Thank You for Your Time and Attention

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