


# Casualty Loss Reserve Seminar

## ASOPs: New and Improved

---

Commitment Beyond Numbers



Arthur R. Randolph, II, FCAS, MAAA, CPCU, ARM, ARe

Christopher M. Holt, ACAS, MAAA

September 7, 2018

---

---

---

---

---

---


---

---

### Agenda

---

- CAS Antitrust Notice
- Actuarial Standards Board – ASOP Setting Process
- Actuarial Standards of Practice Sections
- ASOP 17 – Expert Testimony by Actuaries
- ASOP 53 – Estimating Future Costs for Prospective...
- Proposed ASOPs
  - Setting Assumptions
  - Modeling
  - Capital Adequacy Assessment for Insurers


1

---

---

---

---

---

---


---


---

### 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 and agendas for such meetings.
- Under no circumstances shall the 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 judgement 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.




2

---

---

---

---

---

---

---

---

### Discussion Ground Rules

- This presentation is prepared and intended for general education and discussion purposes only.
- It should not be used as a substitute for consultation with professional advisors.
- The views and opinions expressed by the panelists may or may not be reflective of their own personal views and opinions; the views and opinions are not expressions of positions of their employers.
- Enjoy the exchange of information and ideas.

---

---

---

---

---

---

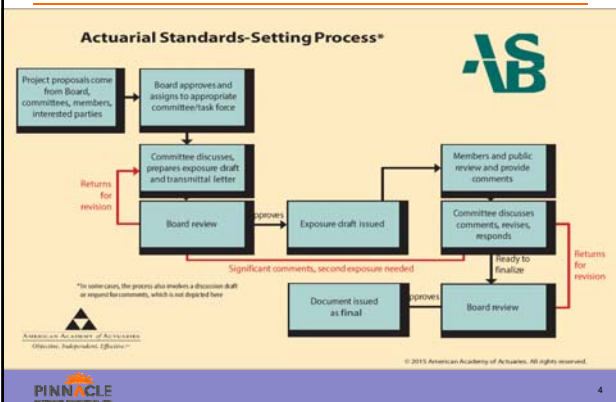
---

---

---

---

### Actuarial Standards Board – ASOP Setting Process




---

---

---

---

---

---

---

---

---

---

### Do you respond to ASB requests for comments?

- A Never
- B Only the Proposed Ratemaking ASOP
- C Rarely
- D Occasionally
- E Always

Question #1

---

---

---

---

---

---

---


---

---

---

**Actuarial Standard of Practice Sections**

- 1
  - Purpose & Scope
  - Cross References
  - Effective Date
- 2
  - Definitions
- 3
  - Analysis of Issues and Recommended Practices
- 4
  - Communication and Disclosures



6

---

---

---

---

---


---

---

---

**ASOP No. 17**  
*Expert Testimony by Actuaries*

*Commitment Beyond Numbers*




---

---

---

---

---

---


---

---

**Have you been involved in providing expert testimony?**

- A Testified in a court procedure
- B Supported actuary who testified in a court procedure
- C No

**Question #2**



8

---

---

---

---

---

---

---

---

### Background

- Impetus
  - Increased activity as expert witnesses
  - Expansion in venue type and topic
- Sample property/casualty areas
  - 1) Actuarial present values of...other benefits
  - 2) Adequacy or appropriateness of reserves, premium rates, pricing or underwriting procedures, or provision for administrative costs
  - 3) Cost impact of risk classification systems, tort liability decisions, or legislative/regulatory proposals
  - 4) Malpractice of an actuary
  - 5) Value of an insurance company or other entity

---

---

---

---

---

---

---

---

---

---

### History

- Originally adopted in 1991
- Subsequent revisions
  - 2002 – to reflect then-current ASOP format and current practices in expert testimony
  - 2011 – updated for deviation language
- Effective: December 1, 2018

---

---

---

---

---

---

---

---

---

---

### Notable Changes

- *Scope* (Section 1.2) – provides additional guidance regarding circumstances to which ASOP applies
- *Expert* (Section 2.4) – clarified definition
- *Reliance Upon Attorney or Other Representative of the Principal* (Section 3.2) – clarified
- *Hypothetical Questions* (Section 3.8) - clarified

---

---

---

---

---

---

---

---

---

---

### Legalese

- ...subject to (or if permitted by) the rules of evidence and procedure and any other rules applicable in the forum...
- ...by the rulings of a judge or other official charged with overseeing the forum...
- ...to the extent appropriate to the forum and intended audience...
- ...in accordance with the rules of the forum and in a manner appropriate to the intended audience...

---

---

---

---

---

---

---

---

### Scope

- Applies to **qualified** experts when providing testimony in court hearings, dispute resolutions, etc.
- Implicitly, now applies to litigation support other than expert testimony
- Does not apply when testimony and expert qualification are unrelated to actuary's profession

---

---

---

---

---

---

---

---

### Which statement is false?

- A Standard does not intend to discourage *reasonable* differences of actuarial opinion or to inhibit innovation in actuarial science
- B Standard does not intend to restrain selection of actuarial assumptions or methods, actuarial opinion communication, or the actuary/principal relationship
- C Standard precludes actuary from challenging application or interpretation of laws and regulations when inconsistent with appropriate actuarial practice

Question #3

---

---

---

---

---

---

---

---

**Which statement is false?**

- A Standard does not intend to discourage *reasonable* differences of actuarial opinion or to inhibit innovation in actuarial science
- B Standard does not intend to restrain selection of actuarial assumptions or methods, actuarial opinion communication, or the actuary/principal relationship
- C Standard **precludes** actuary from challenging application or interpretation of laws and regulations when inconsistent with appropriate actuarial practice

Question #3

---

---

---

---

---

---

---

---

**Definitions**

**Expert** — One who is qualified...whether explicitly or by acceptance of the actuary's **testimony**. An actuary who has been engaged to testify, or permitted to testify, with the expectation that the actuary will ultimately qualify as an expert is treated as an **expert** for purposes of this standard, even if the actuary does not testify or is later determined not to qualify as an expert.

**Testimony** — Communication of opinions or findings presented in the capacity of an expert witness at trial, in hearing or dispute resolution, in deposition, by declaration or affidavit or by any other means through which **testimony** may be received. Such **testimony** may be oral or written.

---

---

---

---

---

---

---

---

**Analysis of Issues & Recommended Practices**

- Overview: Actuaries may differ in conclusions...and a difference of opinion does not indicate failure to meet professional standards
- Conflict with Laws and Regulations: If relevant law or regulation contains a material conflict with actuarial practices, disclose conflict
- Actuarial Assumptions or Actuarial Methods Prescribed by Law or Selected by Others: If performing calculations using assumptions and methods prescribed by law or selected by others, disclose whether results are consistent with own **expert** opinion

---

---

---

---

---

---

---

---

### Analysis of Issues & Recommended Practices

- Hypothetical Questions: If permitted...actuary may refuse to answer hypothetical questions predicated on unreasonable **assumptions**
- Testifying Concerning Other Relevant Testimony: When providing **expert testimony** concerning other relevant testimony (e.g., opposing testimony), testify objectively, focusing on reasonableness and not agreement or disagreement with own opinion
- Consistency with Prior Statements: Be mindful of statements made on same subject and, if different, be prepared to explain
- Limitation of Expert Testimony: If constraints are (or are expected to be) imposed that jeopardize ability to comply with the *Code* or other ASOPs, consider **recusal**

---

---

---

---

---

---

---

---

### Which statement is false?

- A Expert may rely on advice by attorney (or **principal's** other representative) or the **principal** concerning meaning and requirements of rules in the forum
- B Actuary may act as an advocate for a **principal** when giving **expert testimony**
- C If, subsequent to testimony, material error is discovered, make appropriate disclosure to forum or to **principal** or **principal's** representative

Question #4

---

---

---

---

---

---

---

---

### Which statement is false?

- A Expert may rely on advice by attorney (or **principal's** other representative) **or the principal** concerning meaning and requirements of rules in the forum
- B Actuary may act as an advocate for a **principal** when giving **expert testimony**
- C If, subsequent to testimony, material error is discovered, make appropriate disclosure to forum or to **principal** or **principal's** representative

Question #4

---

---

---

---

---

---

---

---

### Communications and Disclosures

- *Written Testimony*: Include descriptions and sources of data, assumptions and methods used in analysis
- *Oral Testimony*: Be prepared to provide documentation supporting oral **testimony**
- *Communication and Disclosure*: Comply with ASOP 41 (*Actuarial Communications*) and disclose as appropriate
  - Material conflicts between laws and ASOPs
  - If calculations are prescribed by law or selected by others
  - Material errors discovered after giving **testimony**




---

---

---

---

---

---

---

---

## ASOP No. 53

### *Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention*

*Commitment Beyond Numbers*




---

---

---

---

---

---

---

---

### When did you last read the ratemaking SoP?

- A When studying for exams
- B When preparing a rate filing
- C When the 1<sup>st</sup> discussion draft was released
- D When the 2<sup>nd</sup> discussion draft was released
- E Never

Question #5




---

---

---

---

---

---

---

---



**Background**

- Estimating future costs is fundamental to actuarial practice
- Statement of Principles in 1988 before ASB formed
- In crafting ASOP on Ratemaking, there were significant differences of opinion on
  - Pricing
  - Price Optimization
  - Methodologies
  - Rate filing requirements
- ASB adjusted to develop ASOP on “future cost estimates for prospective property/casualty risk transfer and risk retention”
- With the completion of this standard, ASB will consider statement of practice on rate filings

---

---

---

---

---

---

---

---

---

---

**Key Points**

- Effective: August 1, 2018
- Applies to actuaries performing services develop or review future cost estimates. Includes:
  - individual components as well as the total cost estimate
  - estimates by class within in a risk classification system
  - reviewing the estimates created by another
- Intended Measure
- Exposure Base
- Historical data
- Adjustments to Historical Data – reflect current environment
- New Coverages or Exposures

---

---

---

---

---

---

---

---

---

---

**Key Points – Current ASOPs**

- Risk Classification – ASOP 12
- Trends – ASOP 13
- Data Quality – ASOP 23
- Credibility – ASOP 25
- Profit & Contingencies – ASOP 30
- Expenses – ASOP 29
- Models – ASOP 38
- Catastrophes – ASOP 38 and 39
- Reinsurance – ASOP 39
- Actuarial Communication – ASOP 41

---

---

---

---

---

---

---

---


---

---

**Key Points – Future ASOPs**

---

- Setting Assumptions
- Modeling

 27

---

---

---

---

---

---


---

---

**Should the Statement of Principles on Ratemaking (SoP) be replaced by an ASOP?**

- A Yes
- B No
- C Unsure

**Question #6**

 28

---

---

---

---

---

---


---

---

**ASOP 53 and SoP on Ratemaking**

---

- SoP, Principle 4: "A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer."
- ASOP 53, 3.2 Intended Measure
  - Actuary determines
  - Measure may vary by element
  - Affected by the principal, legal requirements, and the regulatory environments
  - Measures: mean, mean plus margin, specific percentile, etc.

 29

---

---

---

---

---

---


---

---

**Does ASOP 53 allow more flexibility in estimating future costs than the SoP?**

- A Yes
- B No
- C Unsure

Question #7



30

---

---

---

---

---


---

---

---

**Proposed ASOP  
Setting Assumptions**

*Commitment Beyond Numbers*



---

---

---

---

---

---


---

---

**Do you document material assumptions in your report?**

- A Never
- B Rarely
- C Occasionally
- D Always

Question #8



32

---

---

---

---

---

---

---

---

### Background

- Exposure Draft: December 8, 2016
  - Comments due: April 30, 2017
- ASB will review 2<sup>nd</sup> exposure draft September 2018
- “Assumption setting is fundamental to the actuarial services performed by actuaries across all practice areas”
  - Certain practice-specific assumption-setting standards exist
  - ASB believes gaps exist and useful to have for all practice areas
- Applies to setting assumptions in all practice areas
- Cross references with ASOPs 25 and 41

<http://www.actuarialstandardsboard.org/asops/setting-assumptions-exposure-draft/>

---

---

---

---

---

---

---

---

---

---

### Key Points

- Assumptions should be reasonable for intended purpose
  - Each assumption
  - In aggregate
  - Use in methodology or model
- Adjustments for data deficiencies
  - Compensate for know deficiencies
  - Document adjustments
- Reliance on others
- Assumptions set by others

---

---

---

---

---

---

---

---

---

---

## Proposed ASOP

### Modeling

*Commitment Beyond Numbers*

---

---

---

---

---

---

---

---

---

---

**Background**

- Purpose: “provides guidance to actuaries selecting, designing, building, modifying, developing, using, reviewing, or evaluating **models** when performing actuarial services”
- 3<sup>rd</sup> Exposure Draft August 2016
- Comment Deadline October 31, 2016
- Boxscore May 2018 - 4<sup>th</sup> exposure draft

<http://www.actuarialstandardsboard.org/asops/modeling-2/>



36

---

---

---

---

---

---

---

---

---

---

**Key Points**

- Definitions:
  - **Simple Model** — “A model wherein, in the actuary’s professional judgment, the model results are transparent and can be predicted without an actual model run or readily obtained from an external source that is not another model.”
  - **Model** — “A simplified representation of relationships among real world variables, entities, or events using statistical, financial, economic, mathematical, or scientific concepts and equations.”
- This “guidance applies to models that are not simple models.”
  - Actuaries professional judgement
  - Indented users rely heavily on results
  - Use has a material financial effect



37

---

---

---

---

---

---

---

---

---

---

**Proposed ASOP**  
**Capital Adequacy**  
**Assessment for Insurers**

*Commitment Beyond Numbers*




---

---

---

---

---

---

---

---

---

---

### Background

- ERM Committee developed ASOPs in response to industry focus on ERM:
  - ASOP 46 – Risk Evaluation in Enterprise Risk Management
  - ASOP 47 – Risk Treatment in Enterprise Risk Management
- ASOPs 46 and 47 provide guidance for overall ERM work
- Capital adequacy traditionally assessed via leverage ratios, RBC ratios, etc.
- 2012: regulators implemented own risk and solvency assessment (ORSA) – requires formal assessment of capital adequacy

---

---

---

---

---

---

---

---

### Background

- Assessment considerations (gauge impact of adverse events):
  - Underwriting results
  - Economic conditions and investment results
  - Strategic plans
  - Management reaction to external events (e.g., recession)
  - Regulator and rating agency reactions
  - Individual companies vs. groups
- Significant variation in assessment approaches
- Required framework to supplement ASOPs 46 and 47

---

---

---

---

---

---

---

---

### History

- 1<sup>st</sup> exposure draft release: September 2016
- 2<sup>nd</sup> exposure draft release: September 2017
- Comments: March 2018
- Next draft: late 2018

<http://www.actuarialstandardsboard.org/asops/capital-adequacy-assessment-insurers-2nd-exposure-draft/>

---

---

---

---

---

---

---

---

### Questions

---



42

---

---

---

---

---

---

---

---

### Thank You for Your Time and Attention

---

**Arthur R. Randolph, II, FCAS, MAAA, CPCU, ARM, ARS**  
Principal & Consulting Actuary  
678.894.7258  
arandolph@pinnacleactuaries.com

**Christopher M. Holt, ACAS, MAAA**  
Consulting Actuary  
678.894.7265  
cholt@pinnacleactuaries.com



Commitment Beyond Numbers

---

---

---

---

---

---

---

---