



Lights! Camera!
Professionalism!

CAS Annual Meeting
November 14-16, 2016



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Legal Disclosure

The views expressed by the panelists are their own and may not necessarily reflect those of their respective employers.



Agenda

- Professional Guidance
- Skit
- Small Group Discussion
- Large Group Discussion
- Takeaways



Professionalism Skit: Consulting Actuaries





Professional Guidance

Precept 1 of the Code of Conduct:

An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession's responsibility to the public and to uphold the reputation of the actuarial profession.





Professional Guidance

Precept 2 of the Code of Conduct:

An Actuary shall perform Actuarial Services only when the Actuary is qualified to do so on the basis of basic and continuing education and experience and only when the Actuary satisfies applicable qualification standards





Professional Guidance

Precept 3 of the Code of Conduct:

An Actuary shall ensure that Actuarial Services performed by or under the direction of the Actuary satisfy applicable standards of practice





Professional Guidance

Precept 13 of the Code of Conduct:

An Actuary with knowledge of an apparent, unresolved, material violation of the Code by another Actuary should consider discussing the situation with the other Actuary and attempt to resolve the apparent violation. If such discussion is not attempted or is not successful, the Actuary shall disclose such violation to the appropriate counseling and discipline body of the profession, except where the disclosure would be contrary to law or would divulge Confidential Information





Professional Guidance

ASOP 36 :Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves

Reserve Evaluation

If the actuary makes use of other personnel within the actuary's control to carry out assignments relative to analyses supporting the opinion, the actuary should review their contributions and be satisfied that those contributions are reasonable.



Professional Guidance

ASOP 23: Data Quality

Reliance on Data Supplied by Others

- In most situations, the data is provided to the actuary by others
- The accuracy and comprehensiveness of data supplied by others are the responsibility of those who supply the data
- The actuary may rely on data supplied by others, but should review the data for reasonableness and consistency, unless, in the actuary's professional judgment, such review is not necessary or not practical
- The actuary is not required to do any of the following:
 - determine whether data or other information supplied by others are falsified or intentionally misleading;
 - develop additional data compilations solely for the purpose of searching for questionable or inconsistent data; or
 - audit the data



Professional Guidance

ASOP 43: Property/Casualty Unpaid Claim Estimates

Required Disclosures

- Significant events, assumptions, or reliances
 - Disclose those that have material impact on estimates
 - Disclose assumptions provided by Principal or outside party
 - Additional disclosure if the actuary cannot determine reasonableness

- Type of range (if applicable); Examples include:
 - Range of estimates of the intended measure
 - Confidence level - disclose risks

- Changes in assumptions, procedures, methods, or models if material
 - Applicable if study is an update of prior analysis
 - Discuss reasons for change (not required to quantify)



Professional Guidance

ASOP 41: Actuarial Communications

Subsequent Events

- The actuary should disclose any events that
 - Became known after the latest information date
 - Become known to the actuary before the report is issued
 - Have a material effect on the findings if it were reflected, and
 - Are not practical to reflect in the report before it is issued



Professional Guidance

ASOP 41: Actuarial Communications

Explanation of Material Differences

- Necessary if a later communication includes materially different results or expresses a different opinion than a former communication on the same issue
- Should make clear that earlier results or opinion are no longer valid, and it should explain the reasons for the change



Skit Background

- Costanza and Benes is a small actuarial firm doing consulting work. Their primary work product is Statements of Actuarial Opinion. They've had a stagnant practice for a number of years, with their client base mostly made up of small regional personal lines companies.
- In mid-December, Vandoleigh Insurance Company, a small regional commercial lines carrier looked to engage their services. They've recently fired their long-time opining actuary, and need to appoint a new one by year-end to do complete their Opinion.





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Key Questions

- Guidance from which specific professional standards would have been most helpful in either mitigating or even preventing the firm from landing in their current predicament? Why?
- Do the firm's actions warrant any sort of disciplinary action from the ABCD? If so, what level of discipline and why?



Small Group Discussion



Key Questions

- Guidance from which specific professional standards would have been most helpful in either mitigating or even preventing the firm from landing in their current predicament?
- Possible Courses of Action
 - Complete new evaluation without updating prior evaluation
 - Issue revisions to prior evaluation prior to completing new evaluation
 - Go to the ABCD for guidance
 - Report George to the ABCD?
 - Other?



Key Takeaways

- As Actuarial analyses gets more and more complex, the actuary should work to ensure they have an understanding of the analyses and that the work is properly documented.
- Know the Standards that apply to the work you are doing





Professionalism Skit: The Elusive Model





Professional Guidance

Precept 1 of the Code of Conduct (Covered in Skit 1)

An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession's responsibility to the public and to uphold the reputation of the actuarial profession.

- Annotation 1-1 -- An Actuary shall perform Actuarial Services with skill and care.





Professional Guidance

Precept 2 of the Code of Conduct (Covered in Skit 1)

An Actuary shall perform Actuarial Services only when the Actuary is qualified to do so on the basis of basic and continuing education and experience and only when the Actuary satisfies applicable qualification standards.





Professional Guidance

Precept 4 of the Code of Conduct

Actuarial Communication should be clear and appropriate to the circumstances and its intended audience & satisfies applicable standards of practice.

- ANNOTATION 4-1. The Actuarial Communication should clearly identify the Actuary as being responsible for it.





Professional Guidance

Precept 8 of the Code of Conduct

An Actuary who performs Actuarial Services shall take reasonable steps to ensure that such services are not used to mislead other parties.

- ANNOTATION 8-1. An Actuarial Communication prepared by an Actuary may be used by another party in a way that may influence the actions of a third party.





Professional Guidance

Precept 10 of the Code of Conduct

An Actuary shall perform Actuarial Services with courtesy and professional respect and shall cooperate with others in the Principal's interest.





Violations of the Code of Professional Conduct

Precept 13 of the Code of Conduct (Covered in Skit 1)

An Actuary with knowledge of an apparent, unresolved, material violation of the Code by another Actuary should consider discussing the situation with the other Actuary and attempt to resolve the apparent violation. If such discussion is not attempted or is not successful, the Actuary shall disclose such violation to the appropriate counseling and discipline body of the profession, except where the disclosure would be contrary to law or would divulge Confidential Information





Professional Guidance – ASOP 38 Using Models Outside Area of Expertise

– 3.1 Introduction

- In performing actuarial work, an actuary may find it appropriate to use models that incorporate specialized knowledge outside of the actuary's own area of expertise. When using such a model, the actuary should do all of the following:
 - a. determine appropriate reliance on experts;
 - b. have a basic understanding of the model;
 - c. evaluate whether the model is appropriate for the intended application;
 - d. determine that appropriate validation has occurred; and
 - e. determine the appropriate use of the model.





Professional Guidance – ASOP 38 Using Models Outside Area of Expertise

– 3.2 Appropriate Reliance on Experts

- An actuary may rely on experts concerning those aspects of a model that are outside of the actuary's own area of expertise. The experts relied upon may either be the experts who provided the model or other experts. In determining the appropriate level of reliance, the actuary should consider the following:
 - a. Are they experts in the applicable field;
 - b. the extent to which the model has been reviewed or opined on by experts in the applicable field; and
 - c. whether there are standards that apply to the model or to the testing or validation of the model and whether the model has been certified as having met such standards.



Professional Guidance – ASOP 38 Using Models Outside Area of Expertise

– 3.5 Appropriate Validation

- The actuary should evaluate the user input and the reasonableness of the model output, including examining the following:
 - a. the results derived from alternate models or methods, where available and appropriate;
 - b. how historical observations, if applicable, compare to results produced by the model;
 - **c. the consistency and reasonableness of relationships among various output results;** and
 - d. the sensitivity of the model output to variations in the user input and model assumptions.





Professional Guidance – ASOP 38 Using Models Outside Area of Expertise

– 4.3 Disclosures

- In communicating the results of actuarial work using a model that incorporates specialized knowledge outside of the actuary's own area of expertise, the actuary should disclose the model(s) used and any adjustments made to the model results. In addition, the actuary should include the following, as applicable, in an actuarial communication:
 - if any material assumption or method was prescribed by law
 - if the actuary states reliance on other sources and thereby disclaims responsibility; and
 - if, in the actuary's professional judgment, the actuary has otherwise deviated materially from the guidance of this ASOP.





Professional Guidance – ASOP 41

Actuarial Communications

- **2.1 Actuarial Communication**

- A written, electronic, or oral communication issued by an actuary with respect to actuarial services.

- **3.4.3 Reliance on Other Sources for Data and Other Information**

- An actuary who makes an actuarial communication assumes responsibility for it, except to the extent the actuary disclaims responsibility by stating reliance on other sources.





Professional Guidance – ASOP 41

Actuarial Communications

– 3.4.4 Responsibility for Assumptions and Methods

- An actuarial communication should identify the party responsible for each material assumption and method. Where the communication is silent, the actuary who issued the communication will be assumed to have taken responsibility.
 - B.3. If the actuary has been unable to judge the reasonableness of the assumption or method without performing a substantial amount of additional work beyond the scope of the assignment, or if the actuary was not qualified to judge the reasonableness of the assumption, the actuary should disclose that fact as specified in section 4.3.





Professional Guidance

- Principle 3 of the Statement of Principles Regarding P&C Insurance Ratemaking:
 - Ratemaking should provide for the costs of an individual risk transfer.
 - When the experience of an individual risk does not provide a credible basis for estimating these costs, it is appropriate to consider the aggregate experience of similar risks.





Professional Guidance

- Statement of Principles Regarding P&C Insurance Ratemaking Considerations:
 - Actuarial Judgment
 - Informed actuarial judgments can be used effectively in ratemaking. Such judgments may be applied throughout the ratemaking process and should be documented and available for disclosure.



Skit Background

- Terry, FCAS, Pricing Director, OutSmart Insurance Company (and Chris' boss)
- Jean, PhD Statistics, Predictive Modeler, OutSmart Insurance Company (not an actuary)
- Chris, ACAS, West Dakota Pricing Manager, OutSmart Insurance Company
- Paul, State Filer, OutSmart Insurance Company
- Scene 1: Chris & Terry in Terry's Office
- Scene 2: Paul & Terry in Terry's Office





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General Questions

- What options (if any) does Terry have?
- If Outsmart Insurance Company withdraws the filing, what could be the ramifications?
- What internal processes could be put in place at Outsmart to prevent this situation?
- What is Chris' degree of culpability for the situation? Has he violated the Code of Conduct?
- What should Chris do now?





Small Group Discussion



Key Takeaways

- As Actuarial analyses gets more and more complex, the actuary should work to ensure they have an understanding of the analyses and that the work is properly documented.
- Know the Standards that apply to the work you are doing



Professionalism Skit: Reserving





Professional Guidance

Precept 1 of the Code of Conduct (Covered in Skit 1)

An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession's responsibility to the public and to uphold the reputation of the actuarial profession.





Professional Guidance

Precept 3 of the Code of Conduct

(Covered in Skit 1)

An Actuary shall ensure that Actuarial Services performed by or under the direction of the Actuary satisfy applicable standards of practice





Professional Guidance

Precept 10 of the Code of Conduct
(Covered in Skit 2)

An Actuary shall perform Actuarial Services with courtesy and professional respect and shall cooperate with others in the Principal's interest.





Professional Guidance

ASOP 43 Property/Casualty Unpaid Claim Estimates

Definition of “Actuarial Central Estimate”

- Estimate that represents an expected value over the range of reasonably possible (but not all possible) outcomes
- Typical actuarial methods do not produce true “expected values” and exclude doomsday and/or systematic shocks in the tail of the distribution
- Estimate that in the actuary’s professional judgment, is neither optimistic nor pessimistic
- Definition intended to clarify the concept rather than assign a precise statistical measure, as commonly used actuarial methods typically do not result in a statistical mean





Professional Guidance

From ASOP 43 Property/Casualty Unpaid Claim Estimates

Required disclosures

- Intended Purpose or Use
- Constraints/Limitations
- Scope of the Unpaid Claim Estimate
- Dates
- Significant events, assumptions, or reliances
- Type of range (if applicable)
- Changes in assumptions, procedures, methods, or models if material
- Reliance on Single Method
- Deviation from Standard





Professional Guidance

CAS Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Expense Reserves

- Principle 3: The uncertainty inherent in the estimation of required provisions for unpaid losses or loss adjustment expenses implies that a range of reserves can be actuarially sound.
- Principle 4: The most appropriate reserve within a range of actuarially sound estimates depends on both the relative likelihood of estimates within the range and the financial reporting context in which the reserve will be presented.





Professional Guidance

- CAS Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Expense Reserves – Considerations
 - Credibility
 - Settlement Patterns
 - External Influences



Skit Background

- Eileen is the Chief Actuary for a monoline Medical Malpractice insurance company. It controls a sizable share of this marketplace. In the past two years, their largest state has passed several reforms which change the amounts of compensation to be paid out malpractice claimants. There have been and continue to be attempts to have these reforms reversed but as of yet these have been unsuccessful.
- In addition to leading the Actuarial department, Eileen is a member of the company's Executive Committee, which also includes the company's CEO and CFO. This Committee has final say in determining the company's booked reserves.



Skit Background

- Dave is the internal actuary who leads the reserving unit for the company. Dave has the responsibility of signing their Statement of Actuarial Opinion. Using reasonable assumptions, he has developed a best estimate of the loss and loss adjustment expense reserves that he believes the company should book for their year-end financial statements.
- John is the actuary from the company's auditing firm. Using reasonable assumptions, he has calculated a range in which he believes the best estimate should fall. Dave's best estimate is below the low end of John's range.



Skit Background

- John and Dave have discussed the situation, and the gap in their estimates stem from differing opinions with respect to the impacts of these reforms. All three actuaries are meeting to discuss the findings.





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Key Questions

- Based on the Professional Guidance, what course of action should Eileen follow in this case?
- How do the roles/job titles of these actuaries impact their professional obligations?



Small Group Discussion



Key Questions

- Based on the Professional Guidance, what course of action should Eileen follow in this case?
- How do the roles/job titles of these actuaries impact their professional obligations?
- Others?





Large Group Discussion



Possible Courses of Action

- Alternative 1 – continue to work at it until the three of them can arrive at a range of estimates that allows for a clean Opinion from Dave and an audit sign-off from John



Possible Courses of Action

- Alternative 2 – Eileen goes with Dave’s recommendation; Dave signs a clean Opinion; Eileen and Dave continue to work to convince John to lower his range, but failing that they are fine with the short-term consequences of a deficient audit finding, confident that long-term they will be proven right



Possible Courses of Action

- Alternative 3 – Eileen goes with John's recommendation; John signs off on the audit; Eileen and John continue to work to convince Dave to issue a clean Opinion, but failing that they are fine with the short-term consequences of a redundant Opinion, confident that long-term they will be proven right



Possible Courses of Action

- Other Alternatives?





Key Takeaways

- The politics of workplace interactions can cause an actuary to blur ethical lines
- Know the Standards relevant to the work you are doing and apply them appropriately





Case Studies Overview

- “Real life” predicaments
- Structure of session
 - Read the case together
 - Review polling question
 - Discuss response
- Disclaimers:
 - Exercise is for educational purposes only.
 - Opinions expressed do not represent the opinion of the respective employers or the Casualty Actuarial Society.
 - No authoritative guidance should be expected of the panelists.



Case Study 1: Draft Issue

- You are a consulting actuary working on an actuarial opinion for an insurance company.
- Your boss has “owned” this account for a number of years and has close working relationships with the company executives. She wanted the client to see others in the firm so this is the first time she is letting another actuary serve as the appointed actuary with the boards approval.
- You deliver a draft of the opinion to the insurance company. When you are working on the draft report exhibits, you realize that you made an error on the excess loss factors. If you correct the error, it would move the actuarial central estimate 0.6%, but the carried reserves would still be in the reasonable range.



Case Study 1: Draft Issue

- Given that you have only delivered the draft, you caught it in time and plan to just update the documentation.
- Your boss does not want you to make the update. “The 0.6% difference is not material and the opinion does not change.” She goes on to state that the client is very sensitive and freaks out if there are any changes between draft and final. That is why she was always the one to do the opinion...she is a perfectionist.
- When you say you are not comfortable with that, she say you can just fix the issue in the documentation as the opinion itself only states the carried reserves not the actuarial central estimate, but don't tell the client.



Case Study 1 Discussion

- In this situation, what is the best course of action?
 - a. Your boss is right. It does not seem material so you can disregard the update. You can just make a note that the excess loss factors should be reviewed in the next analysis.
 - b. You should go over your bosses head and tell the client right away. They are your principal and deserve to know. ..hopefully you can reason with them then update your documentation.
 - c. You should just fix it and not bring it to the clients attention. It is a very minor issue and the opinion remains the same so they don't need to know.



Case Study 2: To Trend or Not to Trend

- You've been working on a pricing analysis for weeks and have a steep severity trend leading to a +10% rate indication in your largest state. After a peer review, your boss wants you to get the indication filed right away.
- While reading an economics article in your free time, you see that a recent and temporary economic phenomenon may be causing your severity issue. It makes you think that maybe you should back off of your severity trend.
- Once back at work, you realize that it will take a week or two to put together the analysis to determine if the economics article and your loss experience are really tied. This would make you miss your filing deadline.
- Just doing some sensitivity testing, if you take the trend to 0% which you think the new info might support, the indication goes slightly negative.



Case Study 2 Discussion

- In this situation, what is the best course of action?
 - a. You should meet your deadline. It is your largest state and the current losses are real so the rate should reflect that.
 - b. You should push the deadline. If the rate indication is so strongly influenced by the trend and you need to do research to see if other non-insurance data does in fact suggests the trend not as strong or maybe non-existent.



Case Study 3: Almost Perfect

- You are a consulting actuary and you are working on a reserve opinion for a small insurance company.
- The company provides you with the prior opinion and supporting documentation (which is spectacular!)
- However, upon examining the data you see some formulas in a spreadsheet that are making adjustments within the loss triangles for which there is no documentation.
- You bring this up with your company contact. After 4 weeks, she tells you she has no idea why that adjustment would be made, but that she was sure there was a good reason as the prior actuary was very smart and talked to the claims guys a lot.
- If you make the same adjustment, the carried reserves are in your reasonable range. Without it, they are deficient.



Case Study 3 Discussion

- In this situation, what is the best course of action?
 - a. Use the adjustments. The rest of the documentation is amazing so there must be some reason why this adjustment was being made.
 - b. Use the adjustments, but just make sure to document it. Documentation will set you free, right?
 - c. Attempt further dialog with the company to see if you can determine what the adjustment is for or if not, reach out to the prior actuary.
 - d. Don't make the adjustment. There is no support for it which makes it unreasonable in your eyes and you are the one that has to sign your name.



Case Study 3 Discussion

- Do you need to discuss this with the prior actuary or go to the ABCD?
 - a. Yes. This could be a material violation of the ASOP (and therefore Code of Conduct Precept 3) as the actuary either made an error with the formulas or did not document all assumptions.
 - b. Maybe.
 - c. No. The violation was not material. It was likely a documentation item she missed based on how nice the rest of the documentation was...she had nothing to hide.



Case Study 4: Overfit Model

- You were recently hired by a small but growing primary insurer which writes mostly personal lines. In the past, class plan reviews have been done using traditional actuarial methods, but for the upcoming homeowners review the chief actuary has asked the pricing actuaries to use GLMs to calculate relativities.
- The homeowners class plan analysis was completed shortly before you joined the company, and your first assignment is to oversee the filing, approval, and implementation of the new class plan.
- You review the model output, as well as the goodness-of-fit and lift results. Much to your surprise, you learn that the modelers never separated the data into training and test sets, and that the model lift is being evaluated on the data that was used to build the model.



Case Study 4: Overfit Model

- You do some work to analyze the model's performance on holdout data, and in your opinion the model actually underperforms the current rating structure.
- You discuss these concerns with your boss, who is not an actuary, but he is very dismissive of them. He informs you that much work has gone into the new rating program, and that deadlines have been repeatedly pushed back. At this point, he says, your job is to file what we have, not redo the modeling.
- You try to explain to your boss that, in your opinion, the company would be better off keeping its current rating plan in place than filing the proposed one. His response is that, after all of the work that has gone into this project, they would look very foolish if they didn't implement something.



Case Study 4 Discussion

- In this situation, what is the best course of action?
 - a. You should follow your boss's directive and work on filing and implementing the proposed plan. The modeling work was done prior to you joining the company, and as long as you don't lie or say anything deceptive about the work, you are not in violation of any actuarial standards.
 - b. You should go to the chief actuary with your concerns, even though that will likely upset your new boss and strain the relationship.
 - c. You should refuse to defend a model that you believe is inaccurate and will harm the insurer's profitability. If that means getting fired from a company to which you were just hired, then so be it.



Case Study 5: Difficult Client

- You are a consulting actuary for a mid-size firm and you work mainly on reserve opinions. Your clients include insurers of all sizes.
- It's near year-end, and though you are very busy, things are mostly going well.
- The only problem is, there is a chief pricing actuary of one of your smallest clients who calls you relentlessly. He feels you don't understand one of his company's fastest growing products, and argues by not splitting that product out in the analysis you are significantly overestimating reserves.
- He sends you mounds of news articles discussing economic trends and tries to show how that program's losses follow those trends (which are declining.)
- The disagreement is such that your ranges of reasonable reserves don't even meet.





Case Study 5 Discussion

- In this situation, what is the best course of action?
 - a. You should take the time to try to reconcile your results with that of the company actuary. Splitting out that line of business may be correct and it would be a violation of the standards to not go through the due diligence.
 - b. This is a small client and it is a very busy time of year for you. You risk missing deadlines by changing the analysis now which is unfair to other clients. It's probably best to ignore him for now and maybe look at it next year.
 - c. You don't want to deal with the company actuary's incessant questions, but it would be wrong to blow off a client. The best course of action is to discuss this situation with your boss and see if you can come to an agreeable solution.

