







Agenda

- Introduction to ASOPs
- ASOP 43
- ASOP 53
- ASOP 36
- ASOP 38

What today's session is all about

"Actuaries are required to adhere to the high standards of conduct, practice, and qualifications of the actuarial profession, thereby supporting the actuarial profession in fulfilling its responsibility to the public." (CAS Website)

- Our goal is heightened awareness of ASOP considerations.
- Panelists will list considerations within their chosen ASOPs.
- Audience will select the considerations for discussion via polling.
- Panelists will discuss considerations interactively with Audience.

INTRODUCTION TO ASOPs

Considerations

"ASOPs are binding on members of the U.S.-based actuarial organizations when rendering actuarial services in the U.S. While these ASOPs are binding, they are not the only **considerations** that affect an actuary's work. Other **considerations** may include legal and regulatory requirements, professional requirements promulgated by employers or actuarial organizations, evolving actuarial practice, and the actuary's own professional judgment informed by the nature of the engagement. The ASOPs provide a basic framework that is intended to accommodate these additional **considerations**." (ASOP 1, Section 1, Overview)

"*Actuarial Services*—Professional services provided to a principal by an individual acting in the capacity of an actuary. Such services include the rendering of advice, recommendations, findings or opinions based on actuarial **considerations**." (ASOP 1, Section 2, Definitions, Discussions, and Related Guidance)

ASOPs with Considerations

- Which ASOPs have considerations?

ASOPs with Considerations

- Which ASOPs have considerations?
 - All but ASOP 1

ASOPs with Considerations


- Which ASOPs have considerations?
 - All but ASOP 1
- Which ASOPs are part of this presentation?

ASOPs with Considerations

- Which ASOPs have considerations?
 - All but ASOP 1
- Which ASOPs are part of this presentation?
 - Depends on how interactive you, our audience, are. But we are limiting ourselves to the ASOPs listed in the agenda

Considerations Polling

- Use text or Web to respond to our polls
- PollEV.com/lauramaxwell451

Sample Polling Question 

Where is your favorite CAS on-site meeting location?

ASOP 43
PROPERTY/CASUALTY UNPAID CLAIM ESTIMATES

Survey Question

What ASOP 43 Considerations should we discuss?

ASOP 43 Purpose

- Provides guidance when performing professional services relating to the estimation of loss and/or LAE for unpaid claims **exclusive** of estimates developed solely for ratemaking purposes
- Applies to estimates for **all classes of entities**, including self-insureds, insurance companies, reinsurers, and governmental entities
- Applies regardless as to whether the actuary refers to the work performed as **reserves**, unpaid claim estimates, or any other term
- Effective September 1, 2007

Survey Question - Preliminary Results

What ASOP 43 Considerations should we discuss?

ASOP 43 - History

1988 CAS SoP on Loss and LAE Reserves	2006 ASOP 43 1 st Draft	2007 ASOP 43 2 nd Draft	2007 ASOP 43 Effective*	2014 CAS SoP on Unpaid Claim Estimates
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* Updated for Deviation Language May 1, 2011

Survey Question – Final Results

What ASOP 43 Considerations should we discuss?

ASOP 43 Considerations

- Section 3.1 Purpose or Use
 - The actuary should identify the intended purpose or use of the unpaid claim estimate.
- Section 4.1
 - In addition, consistent with the intended purpose or use, the actuary should disclose the following in an appropriate actuarial communication:
 - a. the intended purpose(s) or use(s) of the unpaid claim estimate, including adjustments that the actuary considered appropriate in order to produce a single work product for multiple purposes or uses, if any, as described in section 3.1;

ASOP 43 Considerations – Purpose or Use

External Financial Reporting

Internal Management Reporting

Appraisal Work

Scenario Analysis

Multiple Uses

ASOP 43 Considerations

- Section 3.2 Constraints
 - Sometimes constraints exist in the performance of an actuarial analysis
- Section 4.1
 - In addition, consistent with the intended purpose or use, the actuary should disclose the following in an appropriate actuarial communication:
 - b. significant limitations, if any, which constrained the actuary's unpaid claim estimate analysis such that, in the actuary's professional judgment, there is a significant risk that a more in-depth analysis would produce a materially different result, as described in section 3.2;

ASOP 43 Considerations - Constraints

Limited Data	Staff
Time	Other Resources

ASOP 43 Considerations

- Section 3.3 Scope
 - The actuary should identify the following: a. the intended measure of the unpaid claim estimate...
- Section 4.1
 - In addition, consistent with the intended purpose or use, the actuary should disclose the following in an appropriate actuarial communication:
 - c. the scope of the unpaid claim estimate, as described in section 3.3;

ASOP 43 Considerations - Scope

3.3a - Intended Measure

- Types of Measure
- Intended Purpose
- Discounting

3.3b - 3.3f

- Recoverables
- Collectibility Risk
- Unpaid Claims Adjustment Expenses
- Claims to be Covered
- Other Items

ASOP 43 Considerations

- Section 3.4 Materiality
 - The actuary may choose to disregard items that, in the actuary's professional judgment, are not material to the unpaid claim estimate given the intended purpose and use
- Sections 4.1 and 4.2
 - No specific disclosures

ASOP 43 Considerations - Materiality

Professional Judgment Applicable Law

Intended Purpose

ASOP 43 Considerations

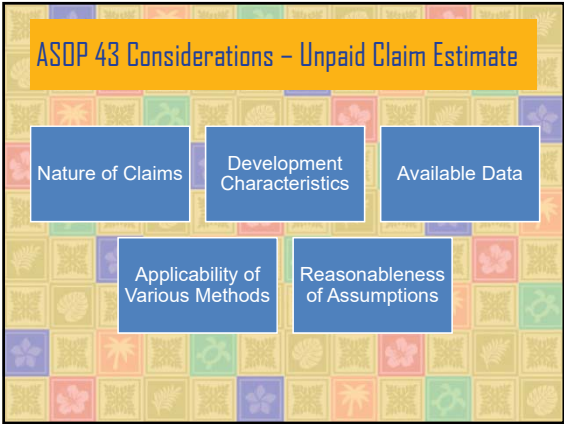
- Section 3.5 Nature of Unpaid Claims
 - The actuary should have an understanding of the nature of the unpaid claims being estimated
- Sections 4.1 and 4.2
 - In addition, consistent with the intended purpose or use, the actuary should disclose the following in an appropriate actuarial communication:
 - e. specific significant risks and uncertainties, if any, with respect to whether actual results may vary from the unpaid claim estimate;

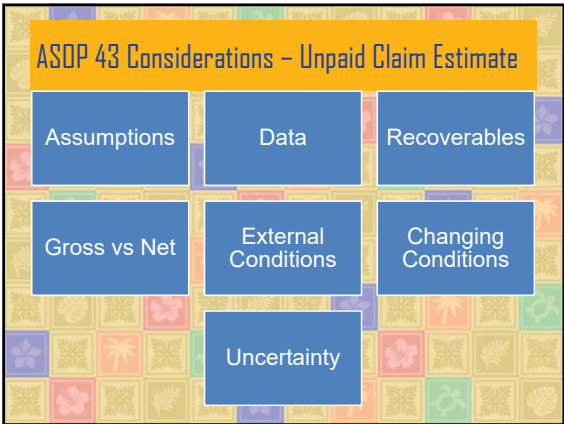
ASOP 43 Considerations - Nature

Coverage	Conditions or Circumstances
Claim Adjustment Process	Potential Recoverables

ASOP 43 Considerations

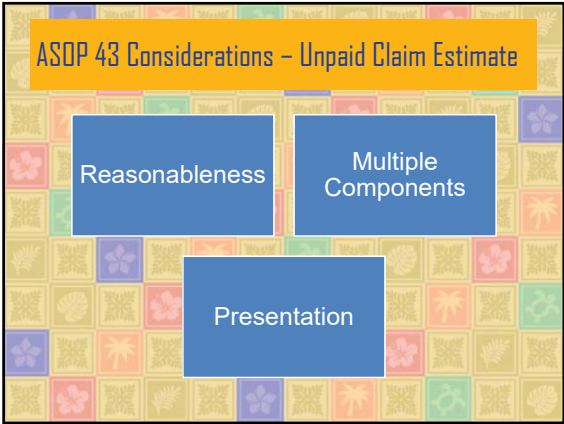
- Section 3.6 Unpaid Claims Estimate Analysis
 - The actuary should consider factors associated with the unpaid claim estimate analysis that, in the actuary's professional judgment, are material and are reasonably foreseeable to the actuary at the time of estimation
- Sections 4.1 and 4.2
 - No specific disclosure





ASOP 43 Considerations

- Section 3.7 Unpaid Claims Estimate
 - The actuary should take into account the following with respect to the unpaid claim estimate...
- Sections 4.1 and 4.2
 - No specific disclosure



ASOP 43 Considerations

- Section 3.8 Documentation
 - The actuary should consider the intended purpose or use of the unpaid claim estimate when documenting work, and should refer to ASOP No. 41, *Actuarial Communications*.

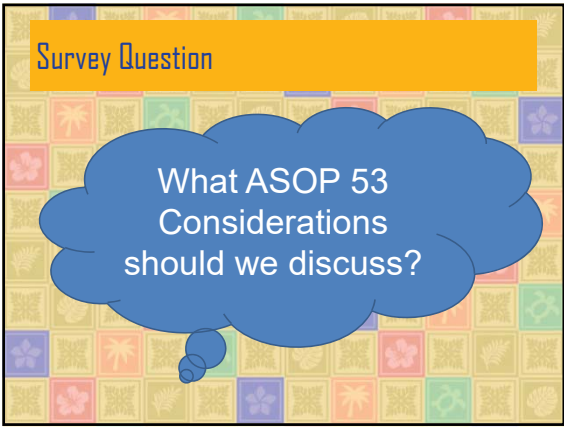
ASOP 43 - Quiz

Which of the following dates is NOT required to be disclosed according to ASOP 43?

- A • Accounting Date
- B • Board Appointment Date
- C • Review Date
- D • Valuation Date

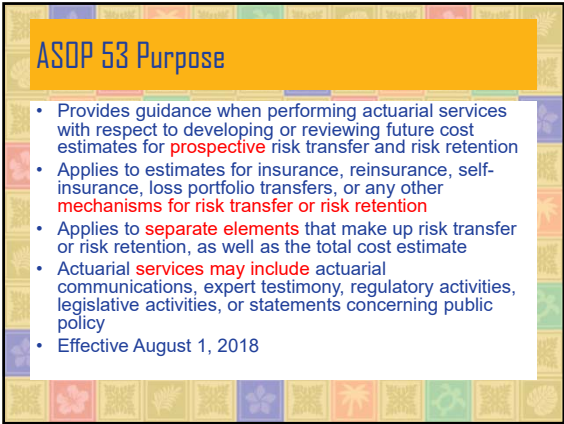


ASOP 53
**ESTIMATING FUTURE COSTS FOR PROSPECTIVE
 PROPERTY/CASUALTY RISK TRANSFER AND RISK
 RETENTION**



Survey Question

What ASOP 53
 Considerations
 should we discuss?



ASOP 53 Purpose

- Provides guidance when performing actuarial services with respect to developing or reviewing future cost estimates for **prospective** risk transfer and risk retention
- Applies to estimates for insurance, reinsurance, self-insurance, loss portfolio transfers, or any other **mechanisms for risk transfer or risk retention**
- Applies to **separate elements** that make up risk transfer or risk retention, as well as the total cost estimate
- Actuarial **services may include** actuarial communications, expert testimony, regulatory activities, legislative activities, or statements concerning public policy
- Effective August 1, 2018

Survey Question - Preliminary Results

What ASOP 53 Considerations should we discuss?

ASOP 53 - History

1988 CAS SoP on Ratemaking

2009 CAS Requests Ratemaking ASOP

2013 CAS SoP 1st Draft

2014 ASOP 53 1st Draft CAS SoP 2nd Draft

2015 ASOP 53 2nd Draft

2016 ASOP 53 3rd Draft

2018 ASOP 53 Effective

SoP Considerations

ASOP 53	Other
<ul style="list-style-type: none">• Exposure Base• Organization of Data• Homogeneity• Loss Development• Trends• Policy Provisions• Reinsurance• Operational Changes• Other Influences• Actuarial Judgment	<ul style="list-style-type: none">• Data (ASOP 23)• Credibility (ASOP 25)• Trends (ASOP 13)• Catastrophes (ASOP 38 & 39)• Classification Plans (ASOP 12)• Profit & Contingency (ASOP 30)• Investment and Other Income (ASOP 30)

Survey Question – Final Results

What ASOP 53 Considerations should we discuss?

ASOP 53 Considerations

- Section 3.1 Future Cost Estimate
 - The actuary should determine the elements that are appropriate to include in the future cost estimate.
- Section 4.1
 - In addition, the actuary should disclose the following in an appropriate actuarial communication:
 - a. the elements included in the future cost estimates (see section 3.1);

ASOP 53 Considerations – Future Cost Estimate

Relate to Applicable Coverage	Include Loss & LAE	Include Operational Expenses
Include Administrative Expenses	Include Cost of Reinsurance	Include Cost of Capital

ASOP 53 Considerations

- **Section 3.2 Intended Measure**
 - The actuary should determine the intended measure of the future cost estimate based on the purpose or use of the estimate. The intended measure may vary for each element of the future cost estimate as needed and appropriate.
- **Section 4.1**
 - In addition, the actuary should disclose the following in an appropriate actuarial communication:
 - b. the intended measure used in developing or reviewing the future cost estimates (see section 3.2);

ASOP 53 Considerations - Intended Measure

Will be Affected by

- Needs of Principal
- Legal Requirements
- Regulatory Environments

Examples

- Mean
- Mean + Risk Margin
- High/Low Estimate of Range
- Specified Percentile

ASOP 53 Considerations

- **Section 3.3 Organization of Data**
 - The actuary should determine what data are available and appropriate for estimating future costs. Based on what data are available and appropriate, the actuary should determine how the data will be organized to develop or review the future cost estimate or any element of the future cost estimate.
- **Section 4.2**
 - The actuary should also include the following in an actuarial communication, if and when applicable:
 - a. if appropriate data are available for the analysis, the actuary should disclose the data organization (level of data aggregation and, if considered, segmentation) used for each element (see section 3.3);

ASOP 53 Considerations - Organization of Data

Aggregation

- Accident Period
- Calendar Period
- Policy Period
- Report Period

Segmentation

- Coverage
- Risk Class
- Risk Characteristic

ASOP 53 Considerations

3.4 Data Quality

- See ASOP No. 23, *Data Quality*

ASOP 53 Considerations

- **Section 3.5 Methods, Models and Assumptions**
 - The actuary should select appropriate methods or models consistent with the intended measure for each element of the future cost. The actuary should use reasonable assumptions (including parameters) appropriate to each method or model.
- **Section 4.1**
 - In addition, the actuary should disclose the following in an actuarial communication:
 - c. the methods or models used in developing or reviewing the future cost estimates (see section 3.5);

ASOP 53 Considerations – Methods, Models and Assumptions

Assumptions

- Implicit/Explicit
- Interpreting Available Experience
- Projecting Future Experience
- Adjusting for Changes in Conditions

Methods or Models

- No Known Significant Bias
- ASOP No. 38

ASOP 53 Considerations

- **Section 3.6 Exposure Base**
 - If selecting a new exposure base or changing an existing exposure base, the actuary should select an exposure base that bears a strong relationship to the cost of risk transfer or risk retention and is practical.
- **Section 4.2**
 - The actuary should also include the following in an actuarial communication, if and when applicable:
 - b. if the actuary selects a new exposure base or changes an existing exposure base, the actuary should disclose the new or revised exposure base (see section 3.6);

ASOP 53 Considerations – Exposure Base

Practical

- Objectively Measurable
- Easily Verifiable

Exposure Bases

- Vary by Coverage
- Composite Exposure Base

ASOP 53 Considerations

3.7 Risk Classification System

- See ASOP No. 12, *Risk Classification (for All Practice Areas)*

ASOP 53 Considerations

- Section 3.8 Use of Historical Data
 - The actuary should determine the extent to which historical data (premium, exposure, loss, and loss adjustment) are available and appropriate for estimating future costs.
- Section 4.2
 - The actuary should also include the following in an actuarial communication, if and when applicable:
 - c. if the actuary uses historical data, the actuary should disclose any adjustments made to the historical data to account for expected differences between the historical data and future experience (see sections 3.8 and 3.10). For adjustments made to address issues of data quality, refer to ASOP No. 23;

ASOP 53 Considerations – Use of Historical Data

Common Exposure Level	Changes to Manual Rates	Impact of Individual Risk Rating Plans
Coverage Being Evaluated	Type of Analysis	Differences in Conditions

ASOP 53 Considerations

3.8.3 Trends

- See ASOP No. 13, *Trending Procedures in Property/Casualty Insurance*

ASOP 53 Considerations – Use of Historical Data

Mix of Business	Policy Contract	Accounting Changes
Reinsurance Changes	Judicial, Legislative or Regulatory	Claim Practice or Reserving Changes
	Operational Changes	

ASOP 53 Considerations

3.9 Expenses

- See ASOP No. 29, *Expense Provisions in P/C Insurance Ratemaking* and ASOP No. 13

ASOP 53 Considerations

- Section 3.10 New Coverages or Exposures
 - If the actuary is estimating the future cost for a new coverage or exposure, and the historical loss and loss adjustment expenses are either unavailable, limited, or not fully representative of the new coverage or exposure
- Section 4.2
 - The actuary should also include the following in an actuarial communication, if and when applicable:
 - d. if the actuary estimates future costs for a coverage or exposure when the historical data are unavailable, limited, or not fully representative, the actuary should disclose the data used and any appropriate adjustments made to the data (see sections 3.8.4 and 3.10);

ASOP 53 Considerations - New Coverages

Similar Coverages	Data on the Phenomenon or Events
Differences with Relevant Data	Appropriate Adjustments

ASOP 53 Considerations

3.11 Credibility

- See ASOP No. 25, *Credibility Procedures*

ASOP 53 Considerations

3.12 Treatment of Catastrophes

- See ASOP No. 38 and No. 39, *Treatment of Catastrophe Losses in P/C Ratemaking*

ASOP 53 Considerations

- Section 3.13 Treatment of Infrequent Events
 - The actuary should consider whether it is necessary to use methods that adjust for either the presence or absence of infrequent large losses in the historical data set
- Sections 4.1 and 4.2
 - No specific disclosure

ASOP 53 Considerations – Infrequent Events

Longer Experience Period

Catastrophe Models ASOP 39

ASOP 53 Considerations

- Section 3.14 Reinsurance
 - When the cost of reinsurance is reflected in future cost estimates, the actuary should select appropriate methods or models, along with reasonable assumptions, for estimating the cost associated with reinsurance arrangements expected to apply during the period for which the future costs are being estimated.
- Section 4.2
 - The actuary should also include the following in an actuarial communication, if and when applicable:
 - e. when the cost of reinsurance is reflected in future cost estimates, the actuary should disclose the methods or models, along with the material assumptions, used in estimating the costs of reinsurance (see section 3.14);

ASOP 53 Considerations

3.15 Profit and Contingency Provisions and the Cost of Capital

- See ASOP No. 30, *Treatment of Profit and Contingency Provisions and the Cost of Capital in P/C Insurance Ratemaking*

ASOP 53 Considerations

- Section 3.16 Additional Funding Sources
 - In some mechanisms for risk transfer, income may come from other sources, such as assessments paid by policyholders or other parties including insurers, a group of insurance purchasers, or taxpayers.
- Section 4.2
 - The actuary should also include the following in an actuarial communication, if and when applicable:
 - f. if the actuary considers additional sources of funding, the actuary should disclose how the funding was reflected in estimating the future cost (see section 3.16);

ASOP 53 Considerations – Additional Funding Sources

Source of Funding Allocation

Timing

ASOP 53 - Quiz

ASOP 53 applies when

- A • Developing future cost estimates underlying product prices
- B • Estimating funding requirements for self-insured programs
- C • Developing reinsurance prices
- D • All of the Above

ASOP 36

STATEMENTS OF ACTUARIAL OPINION REGARDING PROPERTY/CASUALTY LOSS AND LOSS ADJUSTMENT EXPENSE RESERVES

Survey Question

What ASOP 36 Considerations should we discuss?

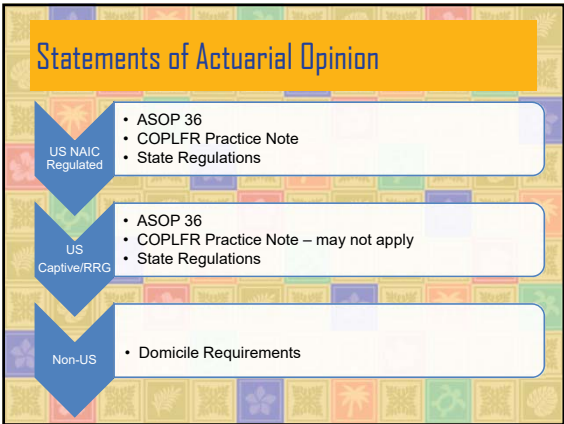
ASOP 36 Purpose

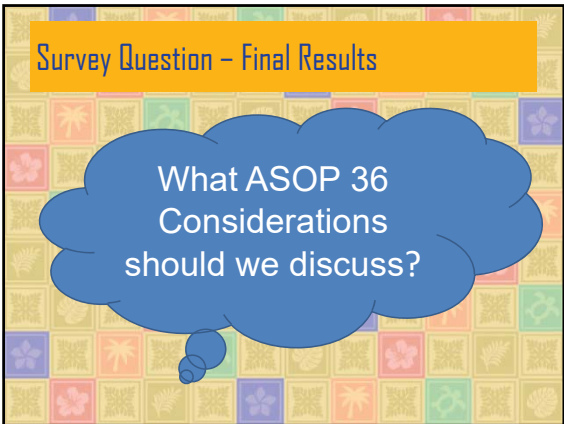
- Provides guidance in **issuing** a written statement of **actuarial opinion** regarding property/casualty loss and LAE reserves
- Applies when providing written statements of actuarial opinion with respect to property/casualty loss and loss adjustment expense reserves of insurance or reinsurance companies and other property/casualty risk financing systems, such as self-insurance
- Effective May 1, 2011

Survey Question - Preliminary Results

What ASOP 36 Considerations should we discuss?







ASOP 36 Considerations

- Section 3.1 Legal and Regulatory Requirements
 - When an actuary prepares a statement of actuarial opinion to satisfy the requirements of law or regulation, the actuary should have the necessary knowledge to comply with the specific requirements of that law or regulation.
- Section 4.1
 - In addition, consistent with the intended purpose, the actuary should disclose the following in the statement of actuarial opinion:
 - h. the disclosure in ASOP No. 41, section 4.2, if any material assumption or method was prescribed by applicable law (statutes, regulations, and other legally binding authority);

ASOP 36 Considerations

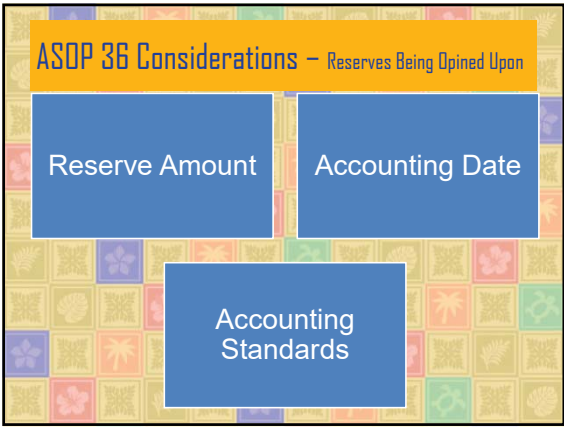
- Section 3.2 Purpose and Users of the SAO
 - The actuary should identify the intended purpose and intended users of the statement of actuarial opinion.
- Section 4.1
 - In addition, consistent with the intended purpose, the actuary should disclose the following in the statement of actuarial opinion:
 - b. the intended user(s) of the statement of actuarial opinion;
 - c. the intended purpose of the statement of actuarial opinion, as described in section 3.2;

ASOP 36 Considerations - Purpose and Use

Purpose	Users
NAIC Annual Statement Instructions	Company
	Regulators

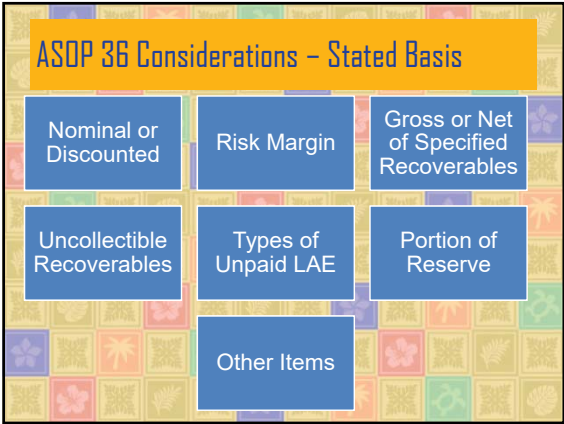
ASOP 36 Considerations

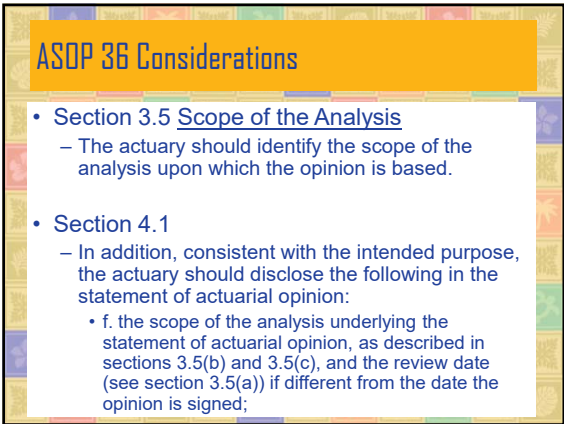
- **Section 3.3 Reserves Being Opined Upon**
 - The actuary should identify the following regarding the reserves being opined upon...
- **Section 4.1**
 - In addition, consistent with the intended purpose, the actuary should disclose the following in the statement of actuarial opinion:
 - d. the reserves being opined upon, as described in section 3.3;

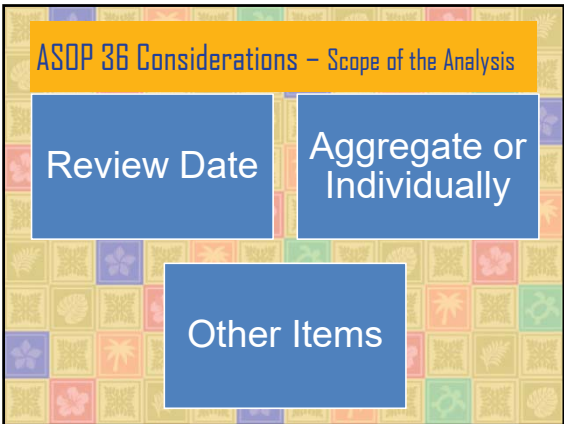


ASOP 36 Considerations

- **Section 3.4 Stated Basis of Reserve Presentation**
 - The actuary should identify the stated basis of reserve presentation, which is a description of the nature of the reserves, usually found in the financial statement and the associated footnotes and disclosures.
- **Section 4.1**
 - In addition, consistent with the intended purpose, the actuary should disclose the following in the statement of actuarial opinion:
 - e. the stated basis of reserve presentation, as described in section 3.4.

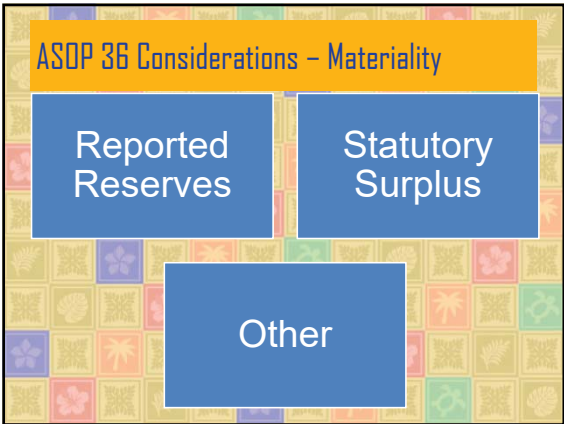






ASOP 36 Considerations

- Section 3.6 Materiality
 - The actuary should evaluate materiality based on the actuary's professional judgment, any applicable materiality guidelines or standards, and the intended purpose for which the actuary is preparing the statement of actuarial opinion.
- Section 4.2
 - In certain cases, consistent with the intended purpose, the actuary may need to make the following disclosures
 - e. If the actuary reasonably believes that there are significant risks and uncertainties that could result in material adverse deviation, an explanatory paragraph should be included in the statement of actuarial opinion



ASOP 36 Considerations

- Section 3.7 Reserve Evaluation
 - The actuary should consider a reserve to be reasonable if it is within a range of estimates that could be produced by an unpaid claim estimate analysis
- Section 4.2
 - In certain cases, consistent with the intended purpose, the actuary may need to make the following disclosures
 - f. If the actuary makes use of an analysis or opinion of another not within the actuary's control for a material portion of the reserves, the actuary should disclose whether the actuary reviewed the others' underlying analysis. If a review was conducted, the actuary should disclose the extent of the review including items such as the methods and assumptions used and the underlying arithmetic calculations.

ASOP 36 Considerations - Reserve Evaluation

Based on Actuary's Unpaid Claim Estimates

- Point Estimate or Range (See ASOP 43)

Based on Another's Unpaid Claim Estimate

- Amount of Reserve
- Nature of exposure and coverage
- Affect on actuary's opinion on the total reserves
- Credentials of the individual(s)

ASOP 36 Considerations

- Section 3.8 Prior Opinion
 - the actuary should determine whether the current assumptions, procedures, or methods differ from those employed in providing the most recent prior opinion
- Section 4.2
 - In certain cases, consistent with the intended purpose, the actuary may need to make the following disclosures
 - a. The actuary should disclose the nature of changes in assumptions, procedures, or methods from those employed in the most recent prior opinion prepared in accordance with this standard, unless the actuary concludes the changes are not likely to have a material effect on the actuary's unpaid claim estimate

ASOP 36 Considerations - Prior Opinion

Change	Not a Change
No Examples Provided	New Reserve Segment
	Updating of Experience Data

ASOP 36 Considerations

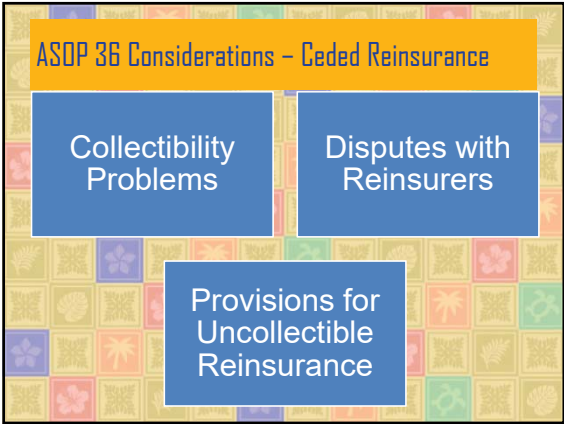
- Section 3.9 Adverse Deviation
 - The actuary should consider whether there are significant risks and uncertainties that could result in future paid amounts being materially greater than those provided for in the reserves.
- Section 4.2
 - In certain cases, consistent with the intended purpose, the actuary may need to make the following disclosures
 - e. If the actuary reasonably believes that there are significant risks and uncertainties that could result in material adverse deviation, an explanatory paragraph should be included in the statement of actuarial opinion.

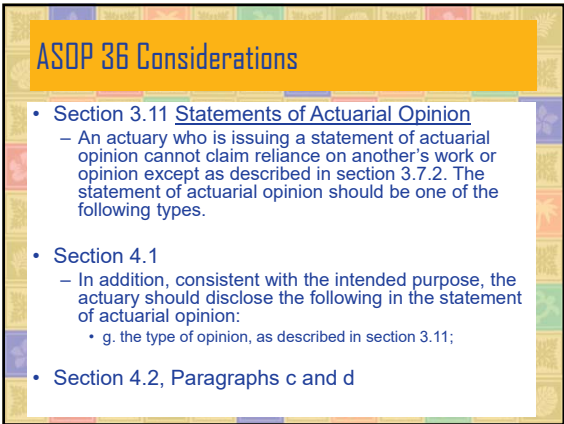
ASOP 36 Considerations – Adverse Deviation

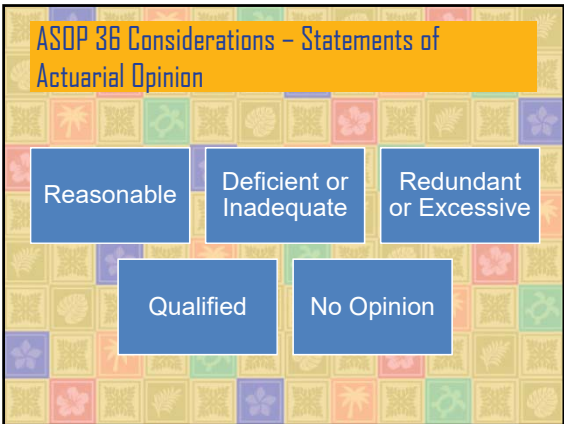
Disclose	Do Not Disclose
<ul style="list-style-type: none"> • Combined risks and uncertainties • Material amount of adverse deviation • Major factors 	<ul style="list-style-type: none"> • Broad statements • Economic changes • Judicial decisions • Regulatory actions • Political or social forces

ASOP 36 Considerations

- Section 3.10 Collectibility of Ceded Reinsurance
 - the actuary should consider the collectibility of ceded reinsurance in evaluating net reserves
- Section 4.2
 - In certain cases, consistent with the intended purpose, the actuary may need to make the following disclosures
 - h. If the reserves being opined upon are net of ceded reinsurance and the amount of ceded reinsurance is material, the actuary should comment on the collectibility of that reinsurance.







ASOP 36 Considerations

- Section 3.12 Adequacy of Assets Supporting Reserves
 - This standard does not obligate the actuary to undertake an evaluation of the adequacy of the assets supporting the stated reserve amount except as may be needed to comply with any applicable law, regulatory requirement, or other ASOP.
- Sections 4.1 and 4.2
 - No specific disclosures

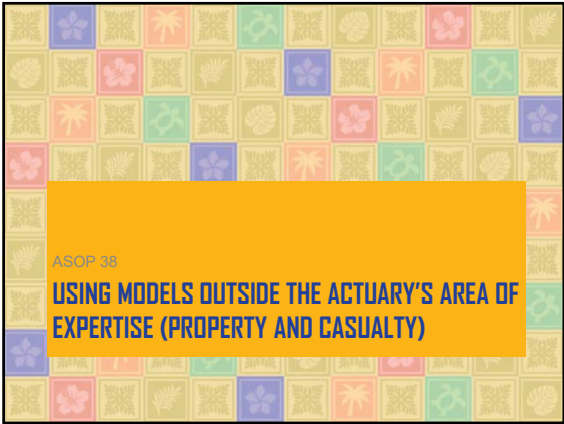
ASOP 36 Considerations

- Section 3.13 Documentation
 - The actuary should consider the intended purpose of the statement of actuarial opinion when documenting work, and should refer to ASOP No. 41, *Actuarial Communications*. When the statement is provided to meet regulatory requirements, the actuary should follow the detailed requirements specified by regulators as to the form and content of supporting reports and other documentation.

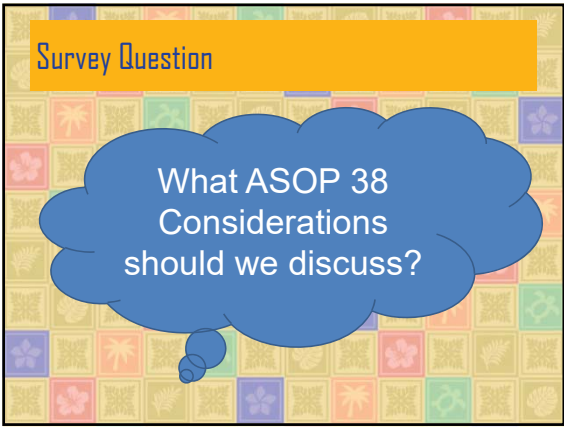
ASOP 36 - Quiz

Held NET reserves are within your range of reasonable reserves but GROSS reserves are above your range. What type of Opinion should you state?

- A • Reasonable
- B • Deficient or Inadequate
- C • Redundant or Excessive
- D • Qualified
- E • No Opinion

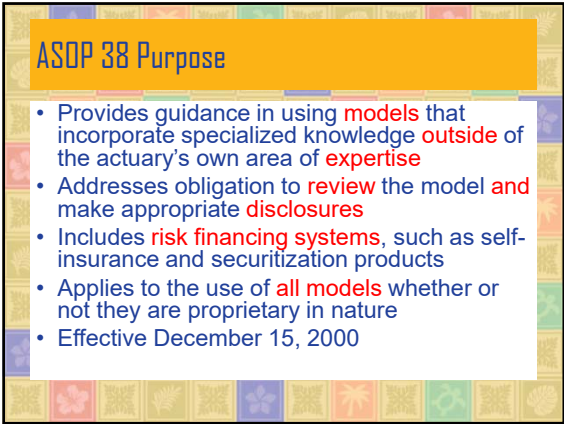


ASOP 38
USING MODELS OUTSIDE THE ACTUARY'S AREA OF EXPERTISE (PROPERTY AND CASUALTY)



Survey Question

What ASOP 38 Considerations should we discuss?



ASOP 38 Purpose

- Provides guidance in using **models** that incorporate specialized knowledge **outside** of the actuary's own area of **expertise**
- Addresses obligation to **review** the model **and** make appropriate **disclosures**
- Includes **risk financing systems**, such as self-insurance and securitization products
- Applies to the use of **all models** whether or not they are proprietary in nature
- Effective December 15, 2000

Survey Question – Preliminary Results

What ASOP 38 Considerations should we discuss?

ASOP 38 History

1988
1st Draft

1999-2000
2nd Draft

12/15/2001
Effective

ASOP 38 Future

Catastrophe Modeling for All Practice Areas

Modeling

Replaces ASOP 38

2013
1st Exposure Draft

2014
2nd Exposure Draft

2016
3rd Exposure Draft

2018
4th Exposure Draft

Survey Question – Final Results

What ASOP 38 Considerations should we discuss?

ASOP 38 Considerations

- Section 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.
- Section 4.1
 - This standard requires documentation whether or not a legal or regulatory requirement exists. The actuary should maintain appropriate documentation on the evaluation of the model and the use of the model output in the analysis. Documentation should demonstrate how the actuary has met the requirements of sections 3.2–3.7 above.

ASOP 38 Considerations – Appropriate Reliance on Experts

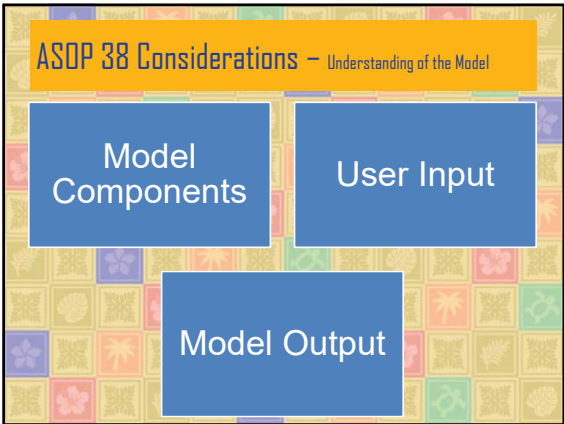
Experts in the Applicable Field

Model Review by Experts

Model Standards

ASOP 38 Considerations

- Section 3.3 Understanding of the Model
 - The actuary should be reasonably familiar with the basic components of the model and understand both the user input and the model output
- Section 4.1
 - This standard requires documentation whether or not a legal or regulatory requirement exists. The actuary should maintain appropriate documentation on the evaluation of the model and the use of the model output in the analysis. Documentation should demonstrate how the actuary has met the requirements of sections 3.2–3.7 above.



ASOP 38 Considerations

- Section 3.4 Appropriateness of the Model for the Intended Application
 - The actuary should evaluate whether the model is appropriate for the particular actuarial analysis, and consider limitations of the model, modifications to the model, and the assumptions needed in order to apply the model output.
- Section 4.1
 - This standard requires documentation whether or not a legal or regulatory requirement exists. The actuary should maintain appropriate documentation on the evaluation of the model and the use of the model output in the analysis. Documentation should demonstrate how the actuary has met the requirements of sections 3.2–3.7 above.

ASOP 38 Considerations – Appropriateness of the Model

Applicability of Historical Data

Developments in Relevant Fields

ASOP 38 Considerations

- Section 3.5 Appropriate Validation
 - The actuary should evaluate the user input and the reasonableness of the model output.
- Section 4.1
 - This standard requires documentation whether or not a legal or regulatory requirement exists. The actuary should maintain appropriate documentation on the evaluation of the model and the use of the model output in the analysis. Documentation should demonstrate how the actuary has met the requirements of sections 3.2–3.7 above.

ASOP 38 Considerations – Appropriate Validation

User Input

- Quality & Availability
- ASOP No. 23 *Data Quality*

Model Output

- Results
- Historical Observations
- Consistency and Reasonableness of Relationships
- Sensitivity to Variations in User Input and Model Assumptions

ASOP 38 Considerations

- Section 3.6 Appropriate Use of the Model
 - Having completed the analysis described in sections 3.2–3.5 above, the actuary should use his or her professional judgment to determine whether it is appropriate to use the model results, subject to any appropriate adjustments.
- Section 4.3
 - 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 as described in section 3.6.

ASOP 38 Considerations

- Section 3.7 Reliance on Model Evaluation by Another Actuary
 - The actuary may rely on another actuary who has, for a particular model, conducted some or all of the evaluations and processes described in this standard
- Section 4.1
 - This standard requires documentation whether or not a legal or regulatory requirement exists. The actuary should maintain appropriate documentation on the evaluation of the model and the use of the model output in the analysis. Documentation should demonstrate how the actuary has met the requirements of sections 3.2–3.7 above.

ASOP 38 - Quiz

True or False: Documentation is required whether or not a regulatory requirement exists.

A • True

B • False

