

## **Comment #12 – 4/30/17 – 11:52 p.m.**

Comments on Proposed ASOP - Estimating Future Costs

Third Exposure Draft

Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Funding

April 30, 2017

My overall opinion is that the guidance provided in the proposed ASOP (3<sup>rd</sup> exposure draft) is needed for the actuarial profession and the users of the actuarial services within the scope of the proposed ASOP. The ASB and its drafting committee have provided an excellent 3<sup>rd</sup> exposure draft that reflects the many of the needs, suggestions and concerns expressed by the commenters from the 2<sup>nd</sup> exposure draft. I believe that this 3<sup>rd</sup> exposure draft still needs a few edits to improve and clarify the ASOP, in particular there are some terms and potential applications of the ASOP that may be confusing or implicit, but should be clarified more explicitly. The objective of my suggested edits is to benefit a wider range of useful application of the ASOP and to reduce the risk of potential misunderstanding of the intent of the ASOP in practical applications.

While the purpose of this ASOP is specifically property/casualty, it seems that much of the content is potentially applicable to other practice areas, perhaps all practice areas.

### Request for Comments

The ASB appreciates comments on all areas of this proposed ASOP and would like to draw the reader's attention to the following questions:

1. Does the proposed ASOP provide sufficient and appropriate guidance to actuaries estimating future costs for prospective property/casualty risk transfer and risk funding?

I think the proposed ASOP could fulfill this "sufficient and appropriate guidance" objective if the term "prospective" is better explained or defined more specifically. While the intended application of the ASOP appears to be "future" costs, what costs in the future can be widely interpreted. The term "prospective" also seems redundant with the term "future" and could be interpreted to mean any forward-looking considerations of cost estimates, for example cost estimates of future settlements for unpaid claims.

The use of the terms "prospective" and "future" are just too subtle when interpreted out of a specific context. The ASOP should provide more specific guidance or clarification so that the ASOP can be applied appropriately to the intended use of the cost estimates. The ASOP seems to contemplate applications of the estimates for two main areas – (1) as input to decisions involving risk transfer transactions, or (2) as input to decisions involving the retention of risk (e.g., risk funding).

2. The proposed ASOP has added reference to "intended measure" for the estimation of all future costs to eliminate any implication that the only appropriate estimate of all future costs was an

expected value without any consideration of potential variability. Is it clear what is meant by “intended measure”?

The reference to “intended measure” is really needed and welcome. The use of this terms will help greatly in the application of the ASOP to practical problems. However, the refence in this question to the appropriate consideration of potential variability, versus expected value, is too limiting. The benefit and value of the ASOP’s use of “intended measure” for actuarial cost estimates is to recognize that there can be a number of key considerations that can affect the basis for such estimates. As other commenters have mentioned, such considerations for the intended measure might include adjustments for large infrequent losses, catastrophic losses, paucity of relevant data, data credibility issues, etc. The proposed ASOP that is based on an “intended measure” allows for the actuary to select one or more measures that may be appropriate for users of the actuarial services.

3. Are the definitions of “risk transfer” and “risk funding” in the proposed ASOP complete from the perspective of all activities in which an actuary is involved when estimating future costs for prospective property/casualty risk transfer and risk funding?

While these two terms are defined in basic terms in the ASOP, the term “risk funding” can be misleading or too restrictive for how actuarial costs estimates are used. “**Risk retention**” is a much more appropriate term that “**risk funding**” because the word “risk funding” indicates a specific action – providing funds for retained risk – which is only one possible use of such cost estimates associated with risk retention. The intent of the ASOP would be much more accurate if the purpose of cost estimates (and the scope of the ASOP) were expressed in terms of providing actuarial services related to “the future cost estimates associated with the **transfer of risk** or the **retention of risk**. This is an easy fix and would make the application of the ASOP much clearer for actuarial services involving risk retention.

4. Is it clear that this proposed ASOP provides guidance only for the estimation of future costs for prospective property/casualty risk transfer and risk funding? Is it clear that the scope does not include items such as the balancing and interaction of potentially competing objectives related to regulation, business objectives, and actuarial cost estimates?

I agree with another commenter that cost estimates within the scope of the proposed ASOP could be used as input to the pricing of risk transfer. In addition, the selection of the “**intended measure**” for such cost estimates may reflect some of the considerations underlying other objectives, such as regulatory requirements or business objectives. However, it seems clear that the proposed ASOP alone is not sufficient to address many other considerations that may be needed to meet all of the needs for the filing of rates under specific regulations, or for the pricing of risk transfer transactions, such as insurance policies. Section 3.2 includes specific mention of the intended measures in terms of the (business) needs of the principal, legal and regulatory requirements, etc. Consequently, the proposed ASOP does provide some guidance in this section that the “intent” (intended measure) is affected by some if the other items mentioned in this question. So perhaps it is not as clear as the question might suggest.

I suggest that there is not an issue with respect to “only for the estimation of costs” versus “balancing competing objectives”. The proposed ASOP requires clear disclosure of the “intended measure” underlying the cost estimates and therefore will serve the purpose of the actuarial services in a way that can be fairly reviewed by another actuary, as needed, with respect to the intended measure in the context of the purpose of the estimates.

5. When the role of the actuary is reviewing the estimate of future costs developed by another actuary, is the guidance provided in the proposed ASOP sufficient and clear?

Yes. The references to ASOP 41 is critical in this regard.

6. Is the level of disclosure required in the proposed ASOP sufficient and appropriate? If the response is no, what are the issues?

Yes. A few edits in Section 4 are provided to help avoid some potential issues.

In **Section 1.1 Purpose**, and the title of the ASOP, the words “future cost estimates for prospective property/casualty risk transfer and risk funding”, should be changed to more accurately describe the application to “prospective decisions” within the context of the purpose of the ASOP. Also, as noted in my response to the proposed ASOP questions, the term “risk funding” should be changed to “risk retention” since the term “risk funding” can be misleading or too restrictive for how actuarial costs estimates are used. “**Risk retention**” is a much more appropriate term than “**risk funding**” because the word “risk funding” indicates a specific action – providing funds for retained risk – which is only one possible use of such cost estimates associated with risk retention.

The specific suggestion is to reword the purpose as follows:

*This actuarial standard of practice (ASOP) provides guidance to actuaries when performing actuarial services regarding property/casualty **coverages** in order to develop or review future cost estimates for prospective decisions or transactions with respect to **risk transfer** or **risk retention**.*

The 2<sup>nd</sup> sentence needs some editing as well, for clarity and completeness

- use “estimates” instead of “estimations”
- replace “This includes” with “This ASOP applies to cost estimates appropriate for”
- add “risk retention” instead of merely “retention”
- add “risk pooling”
- add other “risk retention” mechanisms

Reworded 2<sup>nd</sup> sentence is suggested as follows:

*This ASOP applies to cost estimates appropriate for insurance, reinsurance, self-insurance, risk pooling, risk funding or risk retention, loss portfolio transfers, or any other risk-transfer or risk retention mechanisms.*

Suggested edits to **Section 1.2 Scope**:

- Wording changes for 1<sup>st</sup> paragraph:
  - use wording corresponding to suggestions for Section 1.1
  - change “often” known as to “also” known as (more consistent with other ASOPs and avoids reference to “often” that may be situation specific)
  - change “underlying” to “used as input to deciding” (underlying implies that there is some specific relationship, rather than a more appropriate reference to input to pricing decisions)
  - add “insurance” to product prices
  - add “risk pooling mechanisms” to the examples (a common example)
  - delete “contract” after reinsurance (such pricing can refer to a reinsurance slip or program)

Reworded 1<sup>st</sup> paragraph is suggested as follows:

*This standard applies to actuaries when performing actuarial services regarding property/casualty **coverages** in order to develop or review future cost estimates (also known as actuarial indications) for*

*prospective decisions or transactions with respect to **risk transfer** and **risk retention**. For example, this standard applies when actuaries are developing future cost estimates used as input to insurance product prices, estimating funding requirements for self-insured programs, risk pooling mechanisms and captives, and developing reinsurance prices.*

- Wording changes for 1<sup>st</sup> paragraph:
  - change “are often made” to “can be made” (more consistent with other ASOPs and avoids reference to “often” that may be situation specific)
  - change “and risk funding” to “or risk retention” (consistent with my other rewording suggestions)
  - change “as is practicable” to “to the extent practicable” (more appropriate wording to reflect practicality that is not either-or (as is), but to the extent the guidance can be applied to the reviewer)

Reworded 2<sup>nd</sup> paragraph is suggested as follows:

*As estimates can be made for separate elements of the cost of **risk transfer** or **risk retention** (for example, loss and loss adjustment expenses, operational and administrative expenses, and the cost of capital) and subsequently summed to a total cost estimate, this standard applies to the separate elements as well as the total. If the actuary’s role relates to any of the elements of the future cost estimate, the guidance in this standard applies only to the actuarial services related to those elements. If the actuary’s actuarial services involve reviewing future cost estimates developed by another party, the actuary should use the guidance in section 3 as is practicable. This standard also applies to developing or reviewing the future cost estimates by class within a risk classification system.*

Suggested edits to **Section 2.2 Exposure Base**:

- Wording changes suggested:
  - change “is” used to “may be” used (exposure measurement can vary quite widely by type of coverage, particularly commercial lines and reinsurance – in several cases this basic unit may only be used for rating and not exposure measurement, e.g., rate on line – current wording may mislead by indicating that an exposure base is “basic” (fundamental) to estimating costs)
  - add “as a measure which is approximately proportional to the future costs” instead of “used to measure” (more appropriately describes an exposure base)
  - change “risk funding” to “risk retention” (consistent with my other rewording suggestions)

Reworded Section 2.2 is suggested as follows:

***Exposure Base***—*A basic unit of exposure may be used as a measure which is approximately proportional to the future cost associated with risk-transfer or risk-retention cost. This unit can vary by element of cost.*

As pointed out by another commenter (NAIC), **Section 2.4 Model**, uses different wording than the wording used in ASOP No. 38. That alternative wording is much more robust with respect to models that actuaries may use for the wide range of types of cost estimation within the scope of the proposed

ASOP. Also, the current and future use of predictive models and algorithms for cost estimating is better described by the ASOP No. 38 definition. Moreover, the **Intended Measure** may also be based on simple or complex models and hence a broader definition can be very useful, and potentially less restrictive, for the actuary.

Reworded **Section 2.4** (same as ASOP 38) is suggested as follows:

**Model**—*An information structure, such as a set of mathematical equations, logic, or algorithms, that is used to represent the behavior of specified phenomena. For example, a model may represent statistical, financial, economic, mathematical, or scientific concepts and equations.*

As suggested for another section of the proposed ASOP, **Section 2.5 Risk-Funding**, should be replaced by a definition of **Risk-Retention**. In addition, this is the first reference to “loss” in the proposed ASOP. Use of the term “loss” is appropriately avoided in **Section 2.1 Coverage** and **Section 2.2 Exposure Base**. **Risk-Retention** should be defined specifically in terms of the **coverage**, rather than generic use of the phrase, retention of risk, as might be implied by ignoring risks and their financial implications – ignoring risk is not what is meant by risk retention. Consequently, the wording for **Risk-Retention** should also parallel the wording for **Risk-Transfer** as a risk management and control strategy.

Suggested edits to **Section 2.4 Risk-Retention**:

- Wording changes suggested:
  - change “risk-funding” to “risk-retention” (funding is a specific plan to provide financial resources whereas retention may include self-insurance where self-insured costs are paid from other non-specified sources)
  - add reference to “specific **coverage**” instead of “loss” (the term, loss, is too limiting for this definition since other risk retention costs could be included)

Reworded **Section 2.4 Risk-Retention** is suggested as follows:

**Risk-Retention**—*A risk management and control strategy for the assessment, management or financing of retained risk associated with specific **coverage**. Examples of risk retention include self-insurance and certain types of single parent captives.*

As suggested for **Section 2.5 Risk-Funding**, reference to the term “loss” should be avoided. **Risk-Transfer** should be specifically defined in terms of the **coverage**, “loss” could be given as an example.

Suggested edits to **Section 2.4 Risk-Transfer**:

- Wording changes suggested:
  - change “contractual” to “legally binding agreements, including the operation of certain laws” (funding is a specific plan to provide financial resources whereas retention may include self-insurance where self-insured costs are paid from other non-specified sources)
  - add reference to “indemnify one party by another party” (Many insurance and reinsurance agreements cannot legally shift the responsibility for risk, but they can indemnify. Even though this is a legal distinction, it can be quite important when the ASOPs are used for legal disputes.)

- add reference to “specific **coverage**” instead of “loss” (the term, loss, is too limiting for this definition since other risk transfer costs could be included)

Reworded **Section 2.5 Risk-Transfer** is suggested as follows:

***Risk-Transfer***—A risk management and control strategy that involves legally binding agreements, including the operation of certain laws, that shift responsibility from one party to another, or indemnify one party by another party, for the financial obligations associated with the **coverage**. Examples of risk transfer include insurance, reinsurance, loss portfolio transfers.

Suggested edits to **Section 3.1 Future Cost Estimate**:

- Wording changes suggested:
  - change 1<sup>st</sup> sentence to specify the “actuary’s estimate of future cost”
  - add reference to the cost elements that “relate to the applicable coverage”

Reworded **Section 3.1** is suggested as follows:

*The actuary should determine the elements that are appropriate to include in the actuary’s estimate of future cost. Such elements should relate to the applicable coverage and may include, but are not limited to, loss and loss adjustment expenses, operational and administrative expenses, and the cost of capital.*

Suggested edits to **Section 3.2 Intended Measure**:

- Wording changes suggested:
  - change “intent” to “intended use” (clarify that it is the use that it is important to the selected measure)
  - add sentence along the lines suggested by NAIC comments to be more specific about the measurement basis or considerations that impact the intended measure that is selected)

Reworded **Section 3.2** is suggested as follows:

*The actuary should determine the intended measure based on the intended use or purpose of the future cost estimate. This intended use will be affected by the desires or needs of the principal, legal requirements, and the regulatory environments in which the future cost estimate will be used. The intended measure may be based on statistical measurements or other considerations that are suitable for the actuary’s future cost estimates.*

*Examples of intended measures include, but are not limited to, the statistical mean (also referred to as the expected value), the mean plus risk margin, a range of reasonable outcomes, or a specified percentile of the probability distribution of possible outcomes (also known as the confidence level). For example, a common intended measure is the mean. There are instances in which other measures may be appropriate based upon the intended use or purpose of the estimate.*

*The actuary should disclose the intended measure used in accordance with section 4.2.*

Suggested edits to **Section 3.3 Organization of Data:**

- Wording changes suggested:
  - add 1<sup>st</sup> sentence for the actuary to determine what data is available and appropriate for the task. This is implied, but it should be more plainly stated.
  - add reference to cover and risk class with respect to examples of the level of aggregation
  - delete reference to insurance – reference to coverage is sufficient and more accurate
  - add “level of” aggregation for clarity
  - add “that the actuary believes” before “is appropriate for the type of analysis” (this clearly involves judgment and is not always so simple)
  - adjust wording to example at end of 2<sup>nd</sup> paragraph (for clarity and consistency with level of granularity versus level of aggregation)

Reworded **Section 3.3** is suggested as follows:

*The actuary should determine what data is available and appropriate for estimating future costs. Based on what data is available and appropriate, the actuary should determine how such data will be organized to develop or review the future cost estimate or any element of the future cost estimate.*

*For each element, the actuary should select the level of data aggregation that the actuary believes is appropriate for the type of analysis needed for the actuary’s cost estimates. Examples of data aggregation may include, but are not limited to, aggregating by coverage, risk class, accident period, calendar period, policy period, and report period. The nature of the coverage, the element of the future cost being estimated, and the type of analysis being conducted will influence the actuary’s selection of the level of data aggregation.*

*The actuary also should consider the level of granularity of data needed for the type of analysis being performed. For example, less detailed data may be appropriate for estimating the future cost at a fairly high level, whereas a more granular level of data may be more appropriate for estimating future costs by class within a risk classification system.*

Suggested edits to **Section 3.5 Methods, Models and Assumptions:**

- Wording changes suggested:
  - change “past data” to “data about past events and their outcomes”
  - add “adjusting for changes in conditions affecting the use of past data when estimating future costs” with respect to assumptions (this is frequently a major area for actuarial assumptions when estimating costs)
  - change “no known significant bias” to “avoid significant bias” (The wording in the proposed ASOP seems quite strong and may indicate that the actuary might intentionally use a biased model or method. It is not clear what bias this provision is trying to address. The wording “no known bias” may imply that actuaries might otherwise be okay with some known bias.)



Reworded **Section 3.5** is suggested as follows:

*The actuary should select appropriate **methods** or **models** consistent with the intended measure for estimating the future costs or each element of the future cost. The actuary should use reasonable assumptions (including parameters) appropriate to each **method** or **model**. Assumptions may be implicit or explicit and may involve interpreting data about past events and their outcomes, projecting future trends based on such data, or adjusting for changes in conditions affecting the use of past data when estimating future costs. The actuary should take reasonable care and use professional judgment to avoid significant bias relative to the intended measure in the selection and use of **methods** or **models**, or in the selection of assumptions. When using models, the actuary should refer to ASOP No. 38, Using Models Outside the Actuary’s Area of Expertise (Property and Casualty) [Note: revision pending], and any ASOP on modeling that is adopted by the ASB.*

Suggested edits to **Section 3.6 Exposure Base**:

- Wording changes suggested:
  - change the application of this ASOP provision from the limited “If selecting a new ... or changing an existing...” to “When using or changing ... or selecting a new ...” (There is no apparent reason for limiting the paragraph to a new or changed exposure base. If an existing exposure base is a poor measure of future costs, then the actuary should do something.)
  - restructure the wording of the first paragraph to remove “for example” (This sentence contains a key consideration rather than just an example.)
  - change the reference to “risk transfer” to “risk transfer or risk retention”
  - change “plans” to “mechanisms” in the last paragraph of this section
  - change “have multiple” to “use multiple” in the last paragraph of this section
  - change “designate one” to “select one” in the last paragraph of this section

Reworded **Section 3.6** is suggested as follows:

*When using or changing an existing **exposure base** or selecting a new **exposure base**, the actuary should consider whether there is sufficient evidence of a strong and measurable relationship between the **risk-transfer** or **risk retention** costs and the **exposure base**, as well as the practicality of using an **exposure base** that can be objectively measured, easily verified and is practical to use. To the extent there is not sufficient evidence regarding the quantitative relationship or the practicality of use, the actuary should use professional judgment to select an appropriate **exposure base** or design an alternative approach to estimate future costs.*

*Some **risk-transfer** and **risk-retention** mechanisms may use multiple **exposure bases**. For example, different **exposure bases** may be applied to different aspects of the **coverage** provided (for example, sales revenue for general liability, amount of insurance for commercial property). In undertaking analyses for these mechanisms, it may be appropriate to select one **exposure base**, referred to as the composite **exposure base**, to act as a proxy for the more refined coverage-by-coverage **exposure bases**.*

Suggested edits to **Section 3.7 Risk Classification System**:

- Wording changes suggested:

- Change “are an integral part” to “can be an intergral part” (not all future cost estimates are at the risk classification level)
- change “risk funding” to “risk retention” (to be consistent with other suggestions)

Reworded **Section 3.7** is suggested as follows:

*Risk classification systems can be an integral part of the development of future cost estimates for prospective property/casualty **risk transfer** and **risk retention**. The actuary should refer to ASOP No. 12, Risk Classification (for All Practice Areas), for guidance in the design, review, or change of the classification plan.*

Suggested edits to **Section 3.8 Use of Historical Data**:

- Wording changes suggested:
  - change “insurance policy provisions” to “coverage provisions” (The revised wording can be applied more broadly to all risk transfer or risk retention mechanisms without specifying insurance, self-insurance or other mechanisms.)

Reworded **Section 3.8** is suggested as follows:

*The actuary should determine the extent to which historical data are available and applicable for estimating future costs. For example, the data should be consistent with the **coverage** provisions of the applicable **risk-transfer** or **risk-retention** mechanism.*

Suggested edits to **Section 3.8.1 Use of Historical Exposure and Premium**:

- Wording changes suggested:
  - add “consistent measurement of the historical exposures and the rates used to determine the historical premium” (more explanatory wording)
  - add “where applicable” (manual rates and individual rating plans are not universally applicable)
  - add “the future period applicable to the future cost estimates”

Reworded **Section 3.8.1** is suggested as follows:

*If the actuary is using historical exposure and premium data, the actuary should consider adjusting the data to reflect a consistent measurement of the historical exposures and the rates used to determine the historical premium, if applicable. These considerations include adjusting historical data to a common exposure level and adjusting premium data for historical changes in how premium charges are calculated, including both changes to manual rates and the impact of any individual risk rating plans, where applicable. These adjustments should consider changes during and after the historical period. The actuary should select an appropriate **method** for adjustments that is consistent with the nature of the available data, the **intended measure**, the future period applicable to the future cost estimates and the purpose of the analysis.*

Suggested edits to **Section 3.8.2 Use of Historical Loss and Loss Adjustment Expenses:**

- Wording changes suggested:
  - reworded last sentence of the 1<sup>st</sup> paragraph (edited for clarity)
  - add sentence at end of 1<sup>st</sup> paragraph “The actuary should consider ...”
  - expand the wording for the considerations in the last sentence of the section.

Reworded **Section 3.8.2** is suggested as follows:

*The actuary should determine the extent to which historical loss and loss adjustment expenses are available and applicable as a basis for estimating future costs. In determining the future costs related to loss and loss adjustment expenses, the actuary should consider adjusting historical data using **methods** or **models**, along with reasonable assumptions, that, in the actuary’s professional judgment, reflect the ultimate value of the loss and loss adjustment expenses. The actuary should also consider whether there are significant differences between the historical versus the future **coverage** being estimated, the aggregation level of the analysis (such as overall future cost level analysis versus a risk classification analysis), differences between the future period and the historical conditions under which the historical claims occurred, the claims were adjusted and reserves were set. The actuary should consider how past conditions differ from the future conditions which, in the actuary’s judgment, are likely to affect future costs.*

*The actuary should consider whether the analysis of loss adjustment expense data requires different **methods, models**, or assumptions than the analysis of loss data. Additionally, the actuary should consider whether different **coverages** within a line of business may require different **methods, models**, or assumptions, or if some other adjustments should be made in the analysis.*

Suggested edits to **Section 3.8.3 Additional Adjustments to Historical Data:**

- Wording changes suggested:
  - add “whether ... may be needed ...” in the 1<sup>st</sup> sentence (it may not be necessary to make adjustments, so the actuary should consider whether adjustments are needed.)

Reworded **Section 3.8.3** is suggested as follows:

*The actuary should consider whether additional adjustments to the historical data may be needed to reflect the environment expected to exist in the period for which the future costs are being estimated. These adjustments may include, but are not limited to, the following:*

- a. *judicial, legislative, or regulatory changes;*
- b. *mix of business changes;*
- c. *policy contract changes;*
- d. *claim practice or reserving changes;*
- e. *operational changes;*

- f. *accounting changes; and*
- g. *reinsurance changes.*

Suggested edits to **Section 3.10 New Coverages or Exposures:**

- Wording changes suggested:
  - reference “data” rather than “loss and loss adjustment expenses”
  - add “future” with respect to coverage or exposure
  - reword sub-paragraph c for clarity

Reworded **Section 3.10** is suggested as follows:

*If the actuary is estimating the future cost for a **coverage** or exposure for which the historical data (e.g., loss and loss adjustment expenses) are either unavailable, limited, or not fully representative of the future **coverage** or exposure, the actuary should consider the following in selecting data and developing **methods, models, or assumptions** to use in estimating the future costs:*

- a. *data from **coverages** or exposures that are similar to the new coverage or exposure;*
- b. *data on the phenomenon or events that are contemplated by the new **coverage** or exposure;*
- c. *the extent to which the available data is relevant to evaluating the differences between **coverages** or exposures and the new **coverage** or exposure; and*
- d. *appropriate adjustments to the available relevant data to reflect expected differences identified in section 3.10(c).*

Suggested edits to **Section 3.11 Credibility:**

- Wording changes suggested:
  - reworded for clarity

Reworded **Section 3.11** is suggested as follows:

*The actuary should refer to ASOP No. 25, **Credibility Procedures**, for guidance in considering the credibility given to a particular set of data and the selection of other relevant experience data to be used to supplement a particular set of data, which is also referred to the data used for the complement of credibility.*

Suggested edits to **Section 3.12 Modeling:**

- Wording changes suggested:

- Reworded (editorial)

Reworded **Section 3.12** is suggested as follows:

*If there is an applicable ASOP on modeling adopted by the ASB, the actuary should refer to such ASOP for guidance in the consideration of **models** used for estimating future costs.*

Suggested edits to **Section 3.15 Reinsurance**:

- Wording changes suggested:
  - change “When reinsurance is ...” to “When the benefits and costs of reinsurance are ...” (More specific application of reinsurance to the cost estimates – recognizing benefits and costs.)
  - change “expected to exist” to “expected to apply” (“apply” is more directly relevant)

Reworded **Section 3.15** is suggested as follows:

*When the benefits and costs of reinsurance are 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. If the cost of reinsurance is treated as an expense, the actuary should refer to ASOP No. 29 for additional guidance.*

Suggested edits to **Section 3.17 Additional Funding Sources**:

- Wording changes suggested:
  - Change section title to “Additional Sources of Income”
  - change “to policyholders” to “paid by policyholders” (more accurate wording)
  - change “funding” to “income”
  - additional edits for clarity

Reworded **Section 3.17** is suggested as follows:

### **Section 3.17 Additional Sources of Income**

*In some risk-transfer systems, income may come from other sources. For example, there may be assessments paid by policyholders or other parties, which may include other insurers, a group of insurance purchasers, or taxpayers. The actuary should consider such additional sources of income, where appropriate, and their allocation and timing when estimating future costs.*

Suggested edits to **Section 4.1 Actuarial Communications**:

- Wording changes suggested:
  - add “that the actuary” included or used (more specific to the actuary”
  - change “in developing or reviewing” to “to develop or review” (to be consistent with other suggested edits for other sections)

Reworded **Section 4.1** is suggested as follows:

*When issuing actuarial communications under this standard, the actuary should refer to ASOP Nos. 12, 13, 23, 25, 29, 30, 38, 39, and 41, Actuarial Communications. In addition, the actuary should disclose the following in an appropriate actuarial communication:*

- a. the elements that the actuary included in the future cost estimates (see section 3.1);*
- b. the intended measure that the actuary used to develop or review the future cost estimates (see section 3.2);*
- c. the methods or models that the actuary used to develop or review the future cost estimates (see section 3.5); and*
- d. the assumptions that the actuary used to develop or review the future cost estimates (see section 3.5).*

Suggested edits to **Section 4.2 Disclosures**:

- Wording changes suggested:
  - change “when” to “where”
  - sub-section (b), add “makes adjustments ...”
  - sub-section (c), remove “any” (may be onerous if taken literally)
  - sub-section (d), edits to clarify data not representative
  - sub-section (e), change “funding” to “income” (for consistency with other sections)

Reworded **Section 4.2** is suggested as follows:

*The actuary should also include the following in an actuarial communication, if and where applicable:*

- a. if appropriate data is available for the analysis, the actuary should disclose the data organization used for each element (see section 3.3);*
- b. if the actuary selects a new **exposure base**, changes an existing **exposure base**, or makes adjustments to an **exposure base**, the actuary should disclose the new or revised **exposure base** or the adjustments made (see section 3.6);*
- c. if the actuary uses historical data, the actuary should disclose adjustments made to the historical data (see section 3.8);*
- d. if the actuary estimates future costs for a **coverage** or exposure for which data is unavailable, limited, or not fully representative of historical experience, the actuary should disclose the data were used and what appropriate adjustments were made to the data (see section 3.10);*

e. *when reinsurance is reflected in future cost estimates, the actuary should disclose the **methods** or **models**, along with the assumptions, used in estimating the costs of reinsurance (see section 3.15);*

f. *if the actuary considers additional sources of income, the actuary should disclose how the income was reflected in estimating the future cost (see section 3.17);*

g. *the disclosure in ASOP No. 41, section 4.2, if any material assumption or **method** was prescribed by applicable law;*

h. *the disclosure in ASOP No. 41, section 4.3, if the actuary states reliance on other sources and thereby disclaims responsibility for any material assumption or **method** selected by a party other than the actuary; and*

*the disclosure in ASOP No. 41, section 4.4, if, in the actuary's professional judgment, the actuary has otherwise deviated materially from the guidance of this ASOP.*

Suggested edits to **Appendix 1**:

- Wording changes suggested:
  - change “risk funding” to “risk retention”
  - add “CAS Statement of Principles on Ratemaking” to the Current Practices section
  - change sentence just before last paragraph from “Such other influences may support or compete with actuarial future cost estimates in deciding upon final rates and prices.” to “Such other influences may affect decisions about prices or premium rates, but tsuch influences may or may not be consistent with the intended measure used for actuarial future cost estimates in deciding upon final rates and prices.”
  - change last sentence in last paragraph from “Innovation and use of new data and technologies will continue.” to “As innovation and the use of new data and technologies affect the environment in which actuaries operate, continuing education for actuaries will be important for the application of this ASOP.”

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