Title of Exposure Draft: Proposed Revision of Actuarial Standard of Practice (ASOP) No. 12

Comment Deadline: May 1, 2024

Instructions: Please review the exposure draft, and give the ASB the benefit or your recommendations by completing this comment template. Please fill out the tables within the section below, adding rows as necessary. Sample for completing the template provided at the following link: http://www.actuarialstandardsboard.org/email/2020/ASB-Comment-Template-Sample.docx

Each completed comment template received by the comment deadline will receive consideration by the drafting committee and the ASB. The ASB accepts comments by email. Please send to comments@actuary.org and include the phrase 'ASB COMMENTS' in the subject line. Please note: Any email not containing this exact phrase in the subject line will be deleted by our system's spam filter.

The ASB posts all signed comments received to its website to encourage transparency and dialogue. Comments received after the deadline may not be considered. Anonymous comments will not be considered by the ASB nor posted to the website. Comments will be posted in the order that they are received. The ASB disclaims any responsibility for the content of the comments, which are solely the responsibility of those who submit them.

I.   **Identification:**

Name of Commentator / Company
Josh Taub / The Infinite Actuary (including input from other CAS members)

II.   **ASB Questions (If Any). Responses to any transmittal memorandum questions should be entered below.**

Question No.	Commentator Response

III.   **Specific Recommendations:**

Section # (e.g. 3.2.a)	Commentator Recommendation (Please provide recommended wording for any suggested changes)	Commentator Rationale (Support for the recommendation)
1.1	"This actuarial standard of practice (ASOP or standard) provides guidance to actuaries when performing actuarial services with respect to ~~risk classification~~ **designing, developing, selecting, modifying, reviewing, evaluating, using, or opining on any elements of a risk classification framework.**"	Risk classification is not a defined term and thus is subject to broad interpretation. It would be better to refer to the specific risk classification framework definition where this can be specifically defined (more on this in 2.5 comments below).
1.2	"The guidance in this ASOP does not apply to actuaries when performing actuarial services with respect to individual pension benefit calculations or nondiscrimination testing **for pension or other benefit plans**."	Clarify that the undefined term "nondiscrimination testing" refers specifically to pensions and is not something that other practice areas might interpret in a different way.
2.1	"The result of ~~actions regarding an element of choice~~ **selections, participation, or other relevant actions** taken by **individual** risk subjects, **with attributes not included in the risk classification framework, or with risk characteristics that are included in the risk classification framework but for which the risk classification framework does not accurately reflect the relationship between those risk characteristics and the risk measure, whereby the omission of any such material attributes from the risk classification framework, or the materially inaccurate relationship between those risk characteristics and**	• Clarify that adverse selection may occur due to risk subject participation instead of direct actions (e.g., an independent agent moving them to a different insurer for a lower price with the risk subject's consent). • Clarify that actions are taken at the individual risk subject level, not in aggregate. • Clarify that the risk posed by adverse selection is an issue in the aggregate, not necessarily at the individual risk subject level.

	the risk measure in the risk classification framework ~~which~~ could, **in the aggregate,** adversely impact the ~~effectiveness~~ **ability** of a risk classification framework **to satisfy its intended purpose or to support** or the viability of the financial or personal security system. Adverse selection is sometimes referred to as "**anti-selection.**"" Add: "**For example, adverse selection may occur when the risk classification framework of a financial or personal security system does not consider an attribute that is used in the risk classification frameworks of competing financial or personal security systems. This may cause risk subjects with higher expected costs based on that attribute to be disproportionally selected, thereby increasing the expected costs for the financial or personal security system as a whole.**"	• Updated definition to make it clear that adverse selection occurs when relevant attributes are either not used as risk characteristics in the risk classification framework, or they are used but not in accordance with the relationship between the attribute and the risk measure. For an example of the latter issue, suppose right-handed individuals cost 20% more to insure on average. If I include a right-handed surcharge in my rating plan but only charge 5% more than average while my competitors are all charging the full 20%, then it is very likely I'll experience adverse selection, even though I am including that risk characteristic in my risk classification framework. • Remove "effectiveness" as that is not clearly defined and instead refer to intended purpose, which is more commonly used in ASOPs. • Clarify spelling of anti-selection. • Add example of adverse selection to make it more understandable.
2.x New definition	"**Risk Algorithm – An algorithm, often but not always a continuous mathematical function, used in a risk classification framework, in lieu of assigning risk subjects to risk classes based upon a particular risk characteristic or risk characteristics, to directly model the relationship between a risk measure and the risk characteristic(s) in question.**"	For example, in pricing for the coverage A (building coverage) amount for Homeowners policies, a continuous function (or functions) is often used to obtain the rating factor based on the insured's coverage amount directly instead of grouping risk subjects into risk classes based on coverage amounts. Without this wording, the ASOP precludes that possibility.
2.3	"Attributes used **in the risk classification framework** to assign risk subjects to risk classes **or used in a risk algorithm**."	• In multiple parts of the ASOP, the wording suggests things for actuaries to consider about risk characteristics (e.g., 3.2.3, 3.2.4, 3.2.6). These considerations should only apply to risk characteristics that will be used in the risk classification framework. It would be not feasible for the actuary to consider these items for all possible attributes that could potentially be used in a risk classification framework. As it stands, the word "used" by itself is not strong enough to make this point clear, so the addition of "in the risk classification framework" more clearly gets this point across. If necessary, other parts of the ASOP could refer to "potential" risk characteristics for attributes being considered for inclusion into the risk classification framework. • Add risk algorithm reference to include this possibility as described by that new definition.

2.5	"The system, process, or schema used to assign risk subjects to risk classes, **or used in a risk algorithm**, based on the risk characteristics of each risk subject**, for the purpose of risk selection (i.e., decisions on whether to admit the risk subject into the financial or personal security system including any conditions for admittance) or risk pricing**."	• Make it clear that grouping risks for purposes like reserving, claims analytics, etc., would not be in the scope of this ASOP (in fact, those examples should already be excluded since they are groupings of claims, not risk subjects). While there are valid considerations when grouping or segmenting data for other types of analysis (e.g., homogeneity, credibility), those should be addressed elsewhere. In the basic education for CAS actuaries, risk classification is only discussed in the context of underwriting and pricing; this change makes the ASOP consistent with that common understanding. • Add risk algorithm reference to include this possibility as described by that new definition.
2.6	"A measurement of **risk associated with** the **possible** outcomes of ~~a~~ contingent event**s covered or mitigated by the financial or personal security system. Examples** ~~of risk measures~~ **possible outcomes of contingent events** include mortality rates, healthcare costs, and claim frequency and severity. **Examples of risk measures include estimated covered costs based on the statistical mean, the mean adjusted by a risk margin, the variance, or a quantile of the distribution of possible outcomes. Other risk measures may be appropriate for the intended purpose or intended use of the risk classification framework.**"	• A measure would be something like mean or variance as applied to one of the possible outcomes. Risk classification could be done using different combinations of measures and outcomes. For example, in casualty pricing, normally risks are classified based on expected pure premium differences. However, for risk load calculations, risks might be classified based on the variances in their pure premiums. • Change events to plural. We don't typically calculate things like frequency or severity for individual events. • Note that we may not directly observe the outcomes, but we may model them (e.g., average annual losses for catastrophe pricing), so "possible" captures this. • Add the word "covered" for clarity.
2.x New definition	**"Protected Characteristics – Attributes associated with individuals or entities that are protected under applicable law from unfair discrimination, or from inequitable or prejudicial treatment, based on their characteristics, generalized traits, or other categories to which they belong, or to which they are perceived to belong. Groups with common protected characteristics are sometimes referred to as "protected classes.""**	It makes sense to have a definition of protected characteristics as they would be risk characteristics that are restricted from use in risk classification, and then refer to this definition later in the ASOP.
2.8	Rename term from "unintended bias" to "risk classification bias" Change definition to "**Risk Classification Bias – The impacts or outcomes on risk subjects or on the financial or personal security system resulting from the use of a risk classification framework which contradicts or conflicts with applicable law or with**	• Rename unintended bias to risk classification bias to be more focused on whether the bias occurs as a result of the risk classification framework rather than based on intentions. • Instead of referencing intentions about specific outcomes, refer to applicable law

	the intended purpose of the risk classification framework."	and the intended purpose of the risk classification framework. • Include the potential impact on the financial or personal security system itself in addition to the impact on risk subjects. Actuaries have a duty to both the public in terms of bias on protected classes, but also to consider the possible unintended consequences of the risk classification framework and how that may impact the actuary's principal.
3.1	"This section provides guidance for actuaries when performing actuarial services with respect ~~to risk classification~~ **designing, developing, selecting, modifying, reviewing, evaluating, or opining on any elements of a risk classification framework** within the scope of this ASOP."	Update to be consistent with 1.1 changes and remove reference to undefined "risk classification" term.
3.2	"The intended purpose of ~~and approaches to~~ risk classification **frameworks** can vary significantly. ~~The actuary should exercise professional judgment when providing actuarial services related to risk classification.~~ The actuary may use data, information, **models,** or ~~studies~~ **analytical tools** that are reasonable in the actuary's professional judgment."	• Remove undefined risk classification term. • The reminder to exercise judgment can be used more prescriptively where most appropriate instead of making a broad statement. • Remove "studies" since it's redundant with data and information. Add models and analytical tools as that's how the actuary can use the data and information to perform the risk classification work.
3.2.1	Rename to "INTENDED PURPOSE **AND INTENDED USE**" "The actuary should confirm that the risk classification framework is appropriate for the intended purpose and intended use. **The actuary should evaluate the ability of the risk classification framework to satisfy its intended purpose or to support the viability of the financial or personal security system. In addition, the actuary may need to refer to another ASOP in situations for which the intended purpose or intended use of the risk classification framework is the subject of another ASOP. For example, if the actuary is estimating future property/casualty costs by risk class, the actuary should refer to ASOP No. 53, Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention. "**	• Since this mention use as well as purposes, add "intended use" to the title. • Add 2nd sentence here (and later remove section 3.2.9). • Added last 2 sentences since other ASOPs may be needed to evaluate whether a risk classification framework is satisfying its intended purpose.
3.2.3	"The actuary should ~~have a rational explanation that~~ **consider the extent to which** the relationship between a risk characteristic and a risk measure is ~~not obscure, irrelevant, or arbitrary~~ **reasonable for the intended purpose of the risk classification framework**; however, the actuary is not required to demonstrate a causal relationship.	• Eliminate words not commonly used in ASOPs and replace with consider and refer to the intended purpose of the risk classification framework. • Reword 3rd sentence to say that relationships between and risk characteristics and risk measures when judgmentally selected should at least be plausible and explainable.

	In some cases, the actuary may lack clear evidence or face other practical impediments to demonstrate a consistent relationship between risk characteristics and a risk measure. In such circumstances, the actuary may **be able to** use professional judgment to select risk characteristics **which are plausible and explainable**. ~~Whether it is appropriate to use~~ **The actuary should take into account the appropriateness of using** a risk characteristic ~~may~~ depend**ing** on **the** societal, regulatory, and industry practices **that may apply to** ~~or may depend on~~ the scope and ~~context~~ **intended purpose** of the actuary's work."	• Reworded last sentence and referred to intended purpose.
3.2.4	"The actuary should ~~assess~~ **consider** whether multivariate effects~~,~~ **or** interdependencies~~, or~~ ~~correlations~~ among risk characteristics ~~are material to the assignment of risk subjects to an appropriate risk class~~ **are relevant and material to the intended purpose and intended use of the risk classification framework and to the relationship between the risk characteristics and the risk measure.** To the extent practical**, material, and within the scope of the actuary's assignment**, the actuary should take into account multivariate effects, interdependencies, or correlations."	• Changed "assess" to "consider" and added wording about scope of actuary's work since not every risk classification analysis will use multivariate analysis. • The issue here isn't that risk subjects might be *assigned* into the wrong risk class; so long as the risk characteristics are objective (and verifiable), this shouldn't be an issue. The real issue is whether the relationship between the risk characteristic and the risk measure is distorted due to the risk characteristic being correlated with some other variables, and whether this leads to improper decisions in the design or use of the risk classification framework. For example, if youthful drivers are higher risk than older drivers, and youthful drivers disproportionally drive older cars, then just by virtue of that correlation, older cars would appear to be higher risk. Decisions based on that perceived relationship of older cars being higher risk might then be inappropriate. • With the wording now again about the relationship between a risk characteristic and a risk measure, consider adding this into 3.2.3 and removing 3.2.4.
3.2.5	"The actuary should ~~assess~~ **consider** the potential for adverse selection **to have a material adverse impact on satisfying the intended purpose of the risk classification framework or in supporting the viability of the financial or personal security system** ~~effects that may result or have resulted from the design, development, selection, modification, or continued use of the risk classification framework~~. The actuary should **also** take into account that a lack of ongoing monitoring of the risk classification framework may increase the risk of adverse selection. **When the actuary considers there to be a potential material adverse impact, then the actuary**	Focus on material adverse impact of adverse selection. It isn't relevant how it could have resulted; that should be addressed in the definition of adverse selection. Other wording for clarity.

	should assess the adverse impact. ~~When practical and appropriate within the scope of the actuary's assignment, the actuary should consider~~ **Such an assessment may include** estimating the potential **material adverse** impac**t**s of adverse selection or **providing suggestions for** mitigating the impacts of material adverse selection. **If the actuary is unable to make such an assessment or provide suggestions for mitigation, then the actuary should refer to section 4 for appropriate disclosures.**"	
3.2.6	"The actuary should take into account **the extent to which** ~~whether~~ the risk characteristics can be objectively determined. **The actuary may judge that a** ~~A~~ risk characteristic can be **reasonably** ~~objectively~~ determined if it is based on verifiable facts ~~or if, in the actuary's judgment, the potential for manipulation is not significant~~. **Alternatively, an actuary may judge that, the potential for inconsistent use of risk characteristics or the potential for risk classification bias is not material.** For example, "blindness" may not be an objectively determinable risk characteristic, whereas "vision corrected to no better than 20/100" is a risk characteristic more clearly based on verifiable facts."	• Clarify wording on objectivity as there may be different degrees of objectivity. • Connect manipulation/inconsistent use with definition of risk classification bias above.

3.2.7	"The cost, time, and effort associated with ~~risk classification~~ **performing actuarial services with respect to designing, developing, selecting, modifying, reviewing, evaluating, or opining on any elements of a risk classification framework** may increase as the complexity increases. The actuary should take into account the following:
	  a. the balance among homogeneity within risk classes, heterogeneity between risk classes, and **the availability, accuracy, and** credibility of the **data for** individual risk classes **or for a risk algorithm**; and
	  b. simplicity, ease of use, ease of explanation, and market acceptance.
	
	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 the relevant experience used to supplement the data, which is often referred to as the complement of credibility."
		• Replace undefined risk classification term with reference to risk classification framework.
		• Add wording for availability and accuracy of the data. While some risk characteristics may theoretically be desirable to use, it may be impractical to obtain the needed data and to ensure that data is accurate. Miles driven for auto insurance (prior to telematics) was a common example of this.
		• Add wording with reference to ASOP 25 (same wording that currently appears in ASOP 53 section 3.11).
		• Add risk algorithm reference to include this possibility as described by that new definition.

3.2.8	"The actuary should take into account known or emerging external influences that have the potential for material adverse impacts on the ~~effectiveness~~ **ability** of the risk classification framework **to satisfy its intended purpose** or ~~on~~ **to support** the viability of the financial or personal security system. Such external influences include applicable law and business, government, and industry practices."	Remove effectiveness and refer to ability to satisfy intended purpose.
3.2.9	Remove	Wording added to 3.2.1 to replace this.

3.3	"When modifying, using, reviewing, evaluating, or opining on any elements of an existing risk classification framework, the actuary should understand the frequency of past reviews and the extent of previous changes made to the risk classification framework. The actuary should take into account whether past, recent, or expected changes or lack of changes made to the risk classification framework have the potential to have a material adverse impact on the ~~effectiveness~~ **ability** of the risk classification framework **to satisfy its intended purpose** or ~~on~~ **to support** the viability of the financial or personal security system. The actuary should take into account **and consider testing** whether the risk classification framework will remain appropriate for its intended purpose and **intended** use. **When testing the risk classification framework, the actuary might use alternative risk classes or risk algorithms using different** ~~Such changes could include those affecting the~~ risk characteristics or risk measures ~~used~~ for **the** risk classification **framework."**	• Remove effectiveness and refer to ability to satisfy intended purpose. • Testing wording added to make sure risk classification framework continues to be appropriate. • Replace undefined risk classification term with reference to risk classification framework.
3.4	Rename from "POTENTIAL FOR UNINTENDED BIAS" to "POTENTIAL FOR RISK CLASSIFICATION BIAS" "The actuary should consider the potential for ~~unintended~~ **risk classification** bias **that could result in material adverse impacts on the ability of the risk classification framework to satisfy its intended purpose or to support the viability of the financial or personal security system** ~~as appropriate within the scope of the actuary's assignment~~."	• Renamed consistent with 2.8 changes • Connected this with the intended purpose of the risk classification framework.

3.5	Rename to "**POTENTIAL IMPACTS ON** PROTECTED CLASSES **OR RISK SUBJECTS WITH PROTECTED CHARACTERISTICS**"
	
	"**When assessing the potential for prohibited impacts or outcomes on risk subjects in protected classes, or with protected characteristics, the actuary** ~~The actuary must follow applicable law regarding prohibited impacts or outcomes on risk subjects in protected classes. When doing so, the actuary~~ should understand the **applicable laws and the practices used to comply with the laws with regards to the** following:
	  a. how protected classes**, or protected characteristics,** are defined and identified according to applicable law;
	  b. how ~~unintended~~ **risk classification** bias is treated under applicable law~~, if applicable~~; and
	  c. how **the actuary may select and apply** methods **for assessing the potential for prohibited impacts or outcomes on risk**
		• Clarify the law reference here is specifically in relation to protected classes or characteristics.
		• Use updated wording of risk classification bias consistent with 2.8 changes.
		• Reword 3rd bullet and remove the law reference as it seems unnecessary to specifically mention it for methods.
		• Adds that that actuary might quantify the adverse selection impact from excluding protected classes.

	subjects in protected classes, or with protected characteristics, from ~~for estimating the impact of~~ the risk classification framework ~~on protected classes are addressed under applicable law, if applicable.~~ d. **how the actuary might assess the potential for adverse selection effects, or might mitigate adverse selection effects, which may result from the exclusion of protected characteristics from the risk classification framework**"	
4.1	"4.1 REQUIRED DISCLOSURES IN AN ACTUARIAL REPORT When issuing an actuarial report, the actuary should refer to ASOP Nos. 23, 41, and 56. In addition, the actuary should disclose the following in such actuarial reports, if applicable: a. the intended purpose and intended use of the risk classification framework**, and the ability of the risk classification framework to satisfy its intended purpose or to support the viability of the financial or personal security system** (see section 3.2.1); b. data and model(s) which are used or relied on by the actuary (see section 3.2.2); c. the selected risk measure(s) (see section 3.2.3); d. the selected risk characteristics (see section 3.2.3); e. the impact of significant adverse selection on the ~~effectiveness~~ **ability** of the risk classification framework **to satisfy its intended purpose** or ~~on the~~ **to support the** viability of the financial or personal security system (see section 3.2.5); f. external influences that have a known material adverse impact on the ~~effectiveness~~ **ability** of the risk classification framework **to satisfy its intended purpose** or ~~on the~~ **to support the** viability of the financial or personal security system (see section 3.2.8); ~~g. the effectiveness of the risk classification framework on the viability of the financial or personal security system (see section 3.2.9);~~ h. changes made to the risk classification framework, and the impact such changes could have on the ~~effectiveness~~ **ability** of the risk classification framework **to satisfy its intended purpose** or ~~on~~ **to support** the	• Replace effectiveness with ability to satisfy its intended purpose. • Removed 3.2.9 reference since now included wording in 3.2.1 • Mention supporting viability even if viability of system is not immediately threatened

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	viability of the financial or personal security system (see section 3.3); and i. reliance on information provided by another party (see section 3.6)."	

IV.   General Recommendations (If Any):

Commentator Recommendation (Identify relevant sections when possible)	Commentator Rationale (Support for the recommendation)
1.2 Scope – make verbs in 1st sentence more consistent across ASOPs.	For example, ASOP 53 only uses "developing or reviewing" but it seems like selecting, evaluating, and opining would all be relevant to that ASOP as well. While some verbs only make sense for specific ASOPs (e.g., "designing" here), others should be more standardized when possible and appropriate.

V.   Signature:

Commentator Signature	Date
Joshua Taub, FCAS	4/23/2024