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July 22, 2025

To
All members and stakeholders

Subject: Invitation of Comments on Exposure Draft on Actuarial Practice Standard on Pricing of General Insurance and Health Insurance Products

The General Insurance Advisory Group has recognized the need for a revised Actuarial Practice Standard (APS) that addresses the Pricing of risks/portfolios in light of the updated Use and File (U&F) and File and Use (F&U) guidelines. These guidelines have placed additional responsibilities on the Appointed Actuary/ Product Management Committee (PMC) for Product pricing.

In accordance with the Principles and Procedures for the issuance of Guidance Notes (GNs)/Actuarial Practice Standards (APSs), the following steps have been undertaken:

1. **Identification of Need:** The General Insurance Advisory Group, on its own initiative (suo moto), identified the need for a new APS focused on pricing.
2. **Advisory Group Deliberation:** The matter was deliberated upon by the General Insurance Advisory Group, which concluded that there was a significant need for guidance in this area.
3. **Working Group Appointment:** A working group consisting of at least two members was appointed to draft the new APS. These members are experts in the field of general insurance and have extensive experience in risk and portfolio pricing.

The objective of developing a new APS is to provide clear and concise guidance to actuaries involved in the pricing of insurance products. This guidance is intended to help actuaries meet their professional obligations, manage risks effectively, and support the financial health of their organizations.

Key Aspects of the Draft APS on Pricing of General Insurance and Health Insurance Products:

1. **Use of Language**: The draft clarifies terminologies such as "may" and "any," setting the tone for the level of discretion allowed in actuarial practices.
2. **Definitions**: It includes definitions of critical terms like "Catastrophe," "Coverage," and "Credibility," which are foundational to the application of the standard.
3. **Professional Judgment**: The draft underscores the importance of actuaries exercising reasonable judgment, adhering to ethical standards, and considering practical constraints.
4. **Data Management**: There is a strong focus on the validation of data, addressing deficiencies, and the careful selection of assumptions and methodologies.
5. **Financial Provisions**: Guidance is provided on determining provisions for expenses and profit, with attention to the conditions expected during the effective period of the policies or coverages.
6. **Disclosure Obligations**: The draft mandates comprehensive disclosure requirements for actuaries in their reports, including any deviations from the standard, data adjustments, and the basis of assumptions and methodologies.

7. **Sensitivity and Adaptability**: Actuaries are advised to conduct sensitivity testing and to be mindful of changes in circumstances that may affect their work.
8. **Ongoing Review**: The draft encourages regular review processes to ensure that assumptions used for pricing remain aligned with actual experiences.
9. **Final Disclosures**: It details the final disclosure requirements, including any deviations from the APS, reliance on external information, and the implications of any assumptions and methodologies used.

The draft APS is annexed as Annexure A

Request for Comments

IAI appreciates comments and suggestions on all areas of this proposed Exposure draft within 30 days i.e., by **21st August 2025**. Rationale and recommended wording for any suggested changes would be helpful and requested to be provided in format as per Annexure B and to be submitted to Mr. Paresh Shetty, Executive Assistant to Advisory Group on General Insurance at paresh@actuariesindia.org

Alternatively, you may also share your comments and suggestions by submitting the form using the following link: https://forms.office.com/r/FTS73MkRzY.

Institute of Actuaries of India

ANNEXURE A

INSTITUTE OF ACTUARIES OF INDIA

ACTUARIAL PRACTICE STANDARD (APS) XX
PRICING OF GENERAL INSURANCE AND HEALTH INSURANCE PRODUCTS

Classification: Practice Standard

Legislation or Authority: Section 19(2) (i) of the Actuaries Act 2006

Authority: The Council of the Institute of Actuaries of India

Application

Fellow members of IAI (referred to herein after as "actuary") pricing or reviewing the pricing of General Insurance products. It is understood that IRDAI guidelines/circulars/regulations as applicable, together with this Practice Standard, will be complied with by the actuary.

Compliance

All members of IAI are reminded that they must always comply with the Professional Conduct Standards (PCS) and that Actuarial Practice Standards and Guidance Notes impose additional requirements under specific circumstances.

1.1. An actuary may fail to follow the guidance in an APS but still comply with it where the actuary:

1.1.1. Complies with requirements of law or regulation of IRDAI that conflict with the APS;

1.1.2. Complies with requirements of the actuarial code of professional conduct applicable to the work that conflict with the APS; or

1.1.3. Departs from the guidance in the APS and provides, in every report to which it is relevant, an appropriate statement with respect to the nature, rationale, and effect of any such departure if the guidance is expressed as "should". If the guidance is expressed as "must", the actuary may not depart from it unless paragraph 1.1.1. or paragraph 1.1.2. applies.

1.2. Judgement

1.2.1. The actuary should exercise reasonable judgment in applying these standards. A judgment is reasonable if it is objective and takes account of

a. The spirit and intent of the standards

b. Precepts of ethical and professional conduct intended to guide the conduct of the actuary;

c. Common sense; and

d. Appropriate constraints on time and resources in accordance with Principal of Proportionality

1.2.2. Nothing in an APS should be interpreted as requiring work to be performed that is not proportionate to the scope of the pricing and the benefit that intended users would be expected to obtain from the work (Principle of Proportionality).

1.2.3. Any judgment required by the APS (including implicit judgment) is intended to be the actuary's professional judgment unless otherwise stated.

1.3. Language

1.3.1. Some of the language used in all APS is intended to be interpreted in a very specific way in the context of a decision of the actuary. In particular, the following words are to be understood to have the meanings indicated:

1.3.2. "Must" means that the indicated action is mandatory and failure to follow the indicated action will constitute a failure to comply with the APS, unless the departure is due to a conflict with law (1.1.1.) or code of professional conduct (1.1.2.).

1.3.3. "Should" (or "shall") means that, under normal circumstances, the actuary is expected to follow the indicated action, unless the departure is due to a conflict with law (1.1.1.) or code of professional conduct (1.1.2.). However, in all other cases, if following the indicated action would produce a result that would be inappropriate or would potentially mislead the intended users of the actuarial services, the actuary should depart from the guidance and disclose that fact and provide the reason for not following the indicated action as described in paragraph 1.1.3.

1.3.4. "May" means that the indicated action is not required, nor even necessarily expected, but in certain circumstances is an appropriate activity, possibly among other alternatives. Note that "might" is not used as a synonym for "may", but rather with its normal meaning.

1.3.5. "Any" (as in e.g. "any report") means all such items if they exist, while acknowledging they may not exist. Such a reference does not give rise to a requirement to create such an item.

Status

APS XX Version 0.2 – Second Draft

2 Definitions

The terms below are defined for use in this actuarial standard of practice.

2.1 Catastrophe—A relatively infrequent event or phenomenon that produces unusually large aggregate losses.

2.2 Coverage—The terms and conditions of a plan or contract, or the requirements of applicable law, that create an obligation for claim payment associated with contingent events.

2.3 Credibility—A measure of the predictive value in a given application that the actuary attaches to a particular set of data (predictive is used here in the statistical sense and not in the sense of predicting the future).

2.4 Credibility Procedure—A process that involves the following:

a. the evaluation of subject experience for potential use in setting assumptions without reference to other data; or

b. the identification of relevant experience and the selection and implementation of a method for blending the relevant experience with the subject experience.

2.5 Experience Period—The period of time to which historical data used for actuarial analysis pertain.

2.6 Forecast Period—The future time period to which the historical data are projected.

2.7 Related experience includes premiums, claims, exposures, expenses, and other relevant data for events analogous to the insurance categories under consideration other than the subject experience and may include established rate levels or rate differentials or external data.

2.8 Risk Classification System—A system used to assign risks to groups based upon the expected cost or benefit of the coverage or services provided.

2.9 Subject experience includes premiums, claims, exposures, expenses, and other data for the insurance categories under consideration.

2.10 Trend is the tendency of data values to change in a general direction from one coverage period to a later coverage period.

2.11 Trending Period—The time over which trend is applied in projecting from the experience period to the forecast period.

2.12 Trending Procedure—A process by which the actuary evaluates how changes over time affect items such as claim costs, claim frequencies, expenses, exposures, premiums, retention rates, marketing/solicitation response rates, and economic indices. Trending procedures estimate future values by analysing changes between exposure periods (for example, accident years or underwriting years). A trending procedure does not encompass the process commonly referred to as "development," which estimates changes over time in losses (or other items) within a given exposure period.

3 Introduction

3.1 The actuary should set the rate in such a manner that, under normal circumstances, the product is expected to generate a surplus that ensures adequate return on the capital required to support the product.

3.2 In setting the rate, the actuary should also identify and consider the costs associated with components that make up the rate. Such components should include loss and loss adjustment expenses, operational and administrative expenses, profit and contingency provision.

4 Method

4.1 The rate setting maybe done in such a way that the expected present value of cash inflows less the expected present value of cash outflows results in a surplus at a portfolio level

4.2 The rates thus arrived should be reasonable, not excessive, not inadequate, and not unfairly discriminatory.

4.3 The rates should be proportionate to the risk transferred and the rating structure should, as far as possible, ensure that similar risks should pay a similar premium. When the experience of an individual risk does not provide a credible basis for estimating the expected costs, it is appropriate to consider the aggregate experience of similar or near similar risks.

4.4 The actuary should select appropriate methods and models for estimating the expected cost of the components that make up the rate. The actuary should use reasonable assumptions (including parameters) appropriate to each method and model. The actuary should use methods, models, and assumptions that, in the actuary's professional judgment, are reasonably consistent and unbiased.

4.5 If the rates, terms and conditions are provided by the reinsurer who is expected to bear the majority of the risk, appropriate loadings maybe done such that the company earns adequate return on the capital to be committed for the business . Where the extent of risk on the company's books is sizeable the actuary has to make sure that the data provided by the reinsurer is appropriate to assess the risk to be insured. The actuary has to satisfy himself that the proposed price, over time will help generate adequate risk adjusted returns for the company.

5 Exposure Base

5.1 Exposure base is a selected unit measurement of exposure. The selection and use of an exposure base is a key step in the ratemaking process.
5.2 The selected exposure base should be reasonably proportional to the expected loss.
5.3 Exposure base chosen should ideally be objectively measurable, verifiable and reasonably easy to obtain. The actuary should use his/her professional judgment to ascertain the trade-off between these factors when making a choice for the exposure base.

6 Risk Classification

6.1 Risk characteristics are important structural components of a risk classification system. When selecting which risk characteristics to use in a risk classification system, the actuary should consider the following:

- Relationship of Risk Characteristics and Expected Outcomes – The actuary should select risk characteristics that can reasonably drive the expected outcomes. A good risk characteristic is one in which variation of the risk characteristic is reasonably well correlated to the variation in actual or reasonably anticipated experience.
- Causality—While the actuary should select risk characteristics that are related to expected outcomes, it is not necessary for the actuary to establish a cause and effect relationship between the risk characteristic and expected outcome in order to use a specific risk characteristic.
- Objectivity —The actuary should select risk characteristics that are capable of being objectively determined. A risk characteristic is objectively determinable if it is readily verifiable and observable.
- Practicality—The actuary's selection of a risk characteristic should reflect the trade-offs between practicality and other relevant considerations. A few of the practical considerations that may be relevant are the cost, time, and effort needed to evaluate the risk characteristic, the ongoing cost of administration, the acceptability of the usage of the characteristic, generally accepted practices in the industry and in the business, and the possibility to use easier alternate characteristics that can serve the purpose equally well.
- Applicable Law—The actuary should consider whether compliance with applicable law creates significant limitations on the choice of risk characteristics.

6.2 When establishing risk classes, the actuary should be mindful of the following, which are often interrelated:

- Adverse Selection – If the variation in expected outcomes within a risk class issignificant, adverse selection is likely to occur. To the extent practical, the actuary should establish as homogenous risk classes as possible so that variation in outcomes within the risk class is reduced.
- Credibility – It is desirable that risk classes should be large enough to allow credible statistical inferences regarding expected outcomes. When the available data are not sufficient for this purpose, the actuary should exercise professional judgement to balance predictability and homogeneity.
- Practicality – The cost, time, and effort needed to assign risks to appropriate risk classes will increase with the number of risk classes. The actuary should exercise professional judgment in deciding on the number of risk classes.

7 Data

7.1 The actuary would consider the quality, availability and relevance of available data. The following should be considered:

- Sufficient and Reliable Data – The actuary should consider whether sufficient and reliable data are available to perform the pricing. Data are sufficient if they include the appropriate information for the work. Data are reliable if they are substantially accurate.
- Data Validation – The actuary should take reasonable steps to review the consistency, completeness, and accuracy of the data used. These might include:
    - Undertaking reconciliations against audited financial statements, trial balances, and other relevant records
    - Testing the data for reasonableness against external or independent data
    - Testing the data for internal consistency and consistency with other relevant information and
    - Comparing the data to same data for prior periods.

7.2 Sources of Data for Assumptions –

- To the extent possible and appropriate when setting assumptions, the actuary should consider using data specific to the organization and/or product being priced.
- Where such data are not available, relevant, or sufficiently credible, the actuary should consider industry data, data from other comparable sources, population data, or other published data, adjusted as appropriate.
- Exploratory pricing approach with adequate risk management to manage exposure maybe used when no relevant internal or external data is available.
- The data used, and the adjustments made to it, should be described in pricing report.

7.3 Data Modification – The actuary should disclose any modifications made to the data (such as interpolation, extrapolation or any other adjustments) in the pricing report.

7.4 Deficiencies in Data – The actuary should consider the impact of any data deficiencies (such as inadequacy, inconsistency, incompleteness, inaccuracy, and unreasonableness) on the results. If such deficiencies in the data are not likely to materially affect the results, then the deficiencies need not be considered further. If the actuary cannot find a satisfactory way to resolve the deficiencies, then the actuary should consider whether to:

- Decline to undertake or continue to perform the product pricing or
- Work with the company or its Product Management Committee to modify the product or obtain appropriate additional data or other information; or
- Continue the pricing exercise with a data deficiency loading deemed appropriate by the actuary or
- Perform the pricing to the extent possible, and disclose in any report the data deficiencies (including an indication of the potential impact of those data deficiencies).

7.5 Selection of Assumptions and Methodology

- The actuary should select the assumptions and methodology that are appropriate for the work. In selecting assumptions and methodology, the actuary should consider the circumstances of the organization, current pricing assignment,as well as relevant industry and professional practices.
- The actuary should consider to what extent it is appropriate to adjust assumptions or methodology to compensate for known deficiencies in the available data.
- The actuary should consider to what extent it is appropriate to use assumptions or methodology if they have a known significant bias to underestimation or overestimation of the result.

7.6 Appropriateness of Assumptions –

- Assumptions generally involve significant professional judgment as to the appropriateness of the methodology used and the parameters underlying the application of such methodology.
- Assumptions may (if permitted in the circumstances) be implicit or explicit and may involve interpreting past data and other information or projecting future trends.
- The actuary should consider the appropriateness of the assumptions underlying each component of the methodology used.

7.7 Margins for Adverse Deviations / Contingency –

- The actuary should consider to what extent it is appropriate to adjust the assumptions with margins for adverse deviations / contingencies in order to allow for uncertainty in the underlying data and other information, assumptions, or methodology.
- The actuary should disclose any incorporation of margins for adverse deviations/ contingency in assumptions in the pricing report.
- The actuary should ensure that the pricing remains fair for the policyholder.

7.8 Discontinuities – The actuary should consider the effect of any discontinuities in experience while setting assumptions. Discontinuities could result from:

- Internal circumstances regarding the organization or its functions such as changes in an insurer's claims processing or changes in the mix of business; or
- External circumstances impacting the organization such as changes in the legal, economic, legislative, regulatory, supervisory, demographic, technological, and social environments.

7.9 Individual Assumptions and Aggregate Assumptions – The actuary should assess whether an assumption set on an overall basis is reasonable. While assumptions might be justifiable individually, it is possible that prudence or optimism in multiple assumptions will result in an aggregate assumption set that is no longer valid. If not valid, the actuary should make appropriate adjustments to achieve a reasonable overall assumption set and final result. The pricing should also consider the extant prices of similar products available in the market.

7.10 Internal Consistency of Assumptions and Methodology – The actuary should determine if the assumptions and methodology used for different components of the pricing are materially consistent, and that any significant interdependencies are modelled appropriately. The actuary should disclose any deviations in the pricing report.

7.11 Alternative Assumptions and Sensitivity Testing – The actuary should consider the sensitivity of results to the effect of variations in key assumptions, when appropriate.

8 Change in circumstances

The actuary would consider that the subject experience, related experience and future cash flows may be affected by changes in circumstances that may affect expected claim costs, expense costs, and provision for profit.

Indicative set of relevant circumstances may include items that are largely under the control of the entity providing insurance, such as

a) underwriting practice,
b) distribution system,
c) claims handling and case estimate setting practice,

d) reinsurance arrangements,
e) data processing and accounting systems,
f) distribution or type of business written,
g) provisions of the insurance contract(s), when not legislated,
h) premium rates, and
i) rating variables,

as well as items that are largely not under the control of the entity providing insurance, such as

a) legislated coverage or benefits,
b) the economic, social and legal environments.
c) Interest rate environment

9 Trend

9.1 The actuary should be mindful that subject experience and related experience may be subject to trends over time.

9.2 The actuary may consider economic and social influences that can have a significant impact on trends in selecting the appropriate data to review, the trending calculation, and the trending procedure. In addition, the actuary should consider the timing of the various influences.

10 Unusual Events

10.1The actuary should consider the impact of catastrophes, large losses, pandemics or other unusual events during the pricing exercise.

10.2The long-term frequency and severity of these events needs to be considered.. The actuary should also consider the sensitivity to changes in the historical insurance data relating to thefrequency, severity and geographical locations of these events.

10.3The actuary should also consider the applicability of historical experience and adjustment required to reflect future conditions.

10.4The reinsurance costs incurred by the company to buy protection agains these events should also be considered in pricing.

11 Provision for Expense Cost

11.1The actuary should determine the provisions for

- loss adjustment expenses;
- commission and brokerage fees;
- reinsurance costs;
- other acquisition expenses;
- general administrative expenses;
- applicable taxes, licenses, and fees

11.2In addition, where appropriate, the actuary should consider subdividing the expense categories. Expense provisions should reflect the conditions expected during the time these policies or coverages are expected to be in effect and should include all expenses expected to be incurred in connection with the transfer of risk. The actuary should be mindful of the expenses of management at the company level and related regulations issued by the Authority in this regard.

11.3The actuary should suitably consider the amortization of initial costs vs actual progression of costs over the pricing horizon being used for pricing. Regular review should be done to compare the actual expenses versus what was assumed for the purpose of pricing and deviations if any should be addressed during the subsequent reviews. While it is generally desirable to consider all the product related costs for pricing, marginal costing-based approach may also be adopted depending on the circumstances.

12 Provision for Profit

12.1 General Insurance rates are expected to cover all expected costs, including an appropriate cost of capital associated with the specific risk transfer. This cost of capital can be provided for by estimating that cost after taking leverage and investment income into account.

12.2 Alternatively, the actuary may develop a profit provision and test the profit provision for consistency with the cost of capital. The actuary may use any appropriate method, as long as such method is consistent with the considerations as below:

- Basis for Cost of Capital Estimates—In estimating the cost of capital, the actuary should consider the relationship between risk and return. The methods used for estimating the cost of capital should reflect the risks involved in the risk transfer under consideration. These risks may include insurance, investment, inflation, and regulatory risks, as well as diversification, debt structure, leverage, reinsurance, market structure, and other appropriate aspects of the social, economic, and legal environments. Thus, the cost of capital is likely to vary from one insurer to another. The actuary should recognize that the capital which is needed to support any risk transfer has an opportunity cost regardless of the source of capital or the structure of the insurer.
- Parameters of the Risk Transfer —The actuary should recognize that the cost of capital associated with an individual risk transfer may vary, based on the specific parameters of the transfer. To the extent that limit, deductibles, reinsurance, etc., affect the risk of the insurer, the cost of capital and the amount of capital needed to support the transaction may be affected.

12.3 The actuary should suitably consider the pricing horizon period keeping in mind the internal risk appetite, break-even and profitability targets of the insurer while doing a pricing exercise.

13 Time Value of Money

13.1 The investment return rate for calculating the present value of cash flows would reflect the expected investment income to be earned on assets that might be acquired to discharge the liabilities assumed.

13.2 Among various possible sets of such assets the actuary would consider

- risk-free assets of appropriate duration,
- fixed income assets of appropriate duration, and
- assets which are expected to be acquired to support technical provisions.

13.3 The actuary would consider the fact that the provision for profit is not independent of the selected investment return rate and its associated uncertainty.

14 Communication and Disclosure

14.1 The actuary should, in his/her pricing report explain the pricing methodology adopted including relevant disclosures, so that the intended users are adequately informed about the output of pricing/rate making exercise The actuary in his/her pricing report should present all information with sufficient detail that another actuary qualified in this practice area could make an objective appraisal of the reasonableness of the actuary's work.

14.2 Disclosures – The actuary issuing a pricing report should disclose in that report, if applicable:

- A confirmation that APS has been adhered to subject to disclaimers if any
- Any reliance on information prepared by another party for which the actuary disclaims responsibility;
- Any material omissions, understatements, or overstatements
- Any data validation , adjustments , modification , and deficiencies;
- Any Contingency margin, and margins for adverse deviations in assumptions
- Any material inconsistency in the assumptions and methodology used;

- Assumptions and methodology that have been prescribed by another party which the actuary does not support;
- Assumptions and methodology that are mandated by law or regulation;
- The limitations, and uncertainties, of any model used for the work, and their broad implications;
- The management actions or responses assumed in any model used for the work, and their implications; and
- Reliance on any expert for assumptions and/or methodology.

ANNEXURE B

FORMAT FOR SUGGESTIONS ON DRAFT – APS XX PRICING OF GENERAL INSURANCE AND HEALTH INSURANCE PRODUCTS

<table>
<tr><td colspan="3">Change suggested by</td><td colspan="2"></td></tr>
<tr><td colspan="3">Date</td><td colspan="2"></td></tr>
<tr><td>Note</td><td colspan="4">❖ It is suggested that ONE Page may be used for one change.
❖ This will enable us to group all the suggestions and take a decision on the changes suggested</td></tr>
<tr><td>Page No</td><td>Paragraph</td><td>Sub-paragraph</td><td>Suggested change</td><td>Reasons for change</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
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Alternatively, you can share your suggestions via submitting the form as below:

https://forms.office.com/r/FTS73MkRzY