

1550 REASONABLENESS OF RESULT

.01 *The actuary should examine the reasonableness of a calculation's result. [Effective December 1, 2002]*

.02 As a result of defective data, defective computer software, an accumulation of individually biased assumptions, or the like, a calculation, especially a complex one like a valuation or financial forecast, may be prone to error which checking of the calculation's steps does not reveal but which an examination of its result may reveal. Such an examination is therefore useful and prudent.

.03 The examination would consider simple questions like the following.

How does the result compare to the corresponding result for a prior period or a similar case, or to a related but independently calculated amount? Comparison of a benchmark may be more meaningful than comparison of the result. Examples of a benchmark are the forecasted number of retirees divided by the forecasted number of active employees, the loss ratio implied by claim liabilities, and the change during the year of the result.

How does the result compare to the corresponding result of a rough approximation?

Does the result make common sense?

.04 The answers to such questions may indicate a need for more work.

1560 DOCUMENTATION

.01 *The actuary should use his or her best efforts to compile and secure the retention of appropriate documentation.*

.02 *Where a successor actuary takes possession or control of documentation previously in the possession or control of a predecessor actuary, the successor actuary should use his or her best efforts to make such documentation available to the predecessor actuary, upon request by the predecessor actuary, if needed by the predecessor actuary to respond to queries about the related work.*

.03 *Where a successor actuary or an employer or client, acting on behalf of a successor actuary, requests access to documentation in the possession or control of a predecessor actuary, in order to carry on work, the predecessor actuary should use his or her best efforts to comply with the request. [Effective December 1, 2002]*

.04 Documentation is an integral part of work that affects the application of nearly all standards.

.05 Documentation consists of letters of engagement, working papers, meeting notes, memoranda, correspondence, reports, copies or excerpts of company or plan data and documents, and work plans. Appropriate documentation describes the course of the work and the actuary's compliance with accepted actuarial practice.

.06 Both professional and legal needs may affect the length of time during which documentation is to be retained.

- .02 *The actuary should select appropriate methods, techniques and assumptions recognizing that such elements depend on the circumstances of the case and that a variety of actuarial methods may be appropriate to derive an indicated rate. [Effective January 1, 2012]*

Data

- .03 The actuary would consider the availability and relevance of subject experience and related experience.

Credibility

- .04 The actuary would consider the blending of information from subject experience with information from one or more sets of related experience to improve the predictive value of estimates.

Changes in circumstances

- .05 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.

- .06 Relevant circumstances subject to change may include items that are largely under the control of the entity providing insurance, such as

underwriting practice,
distribution system,
claims handling and case estimate setting practice,
reinsurance arrangements,
data processing and accounting systems,
distribution or type of business written,
provisions of the insurance contract(s), when not legislated,
premium rates, and
rating variables,

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

legislated coverage or benefits, and
the economic, social and legal environments.

Development

- .07 The actuary would consider that subject experience and related experience may be subject to development over time.

Trend

.08 The actuary would consider that subject experience and related experience may be subject to trend over time.

Unusual events

.09 The actuary would consider that subject experience and related experience may or may not have been subject to catastrophes, large losses or other unusual events.

Provision for Expense Costs

.10 The actuary would determine the provision for expense costs that is appropriate for the period during which the rates are expected to be in effect.

.11 In selecting a provision for expense costs, the actuary would consider

the various categories of expense costs that are incurred including, as may be applicable, residual market assessments, statutory assessments, policyholder dividends, and reinsurance costs,

that expense costs may not be directly proportional to premium, and

that one-time expense costs may need to be amortized.

.12 The provision for expense costs, or other assumptions that are pertinent to its derivation, may be specified to the actuary under the terms of an appropriate engagement.

Provision for Profit

.13 An indicated rate would include a provision for profit.

.14 The provision for profit, or other assumptions that are pertinent to its derivation, may be specified to the actuary under the terms of an appropriate engagement.

Time Value of Money

.15 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 with the net cash flows resulting from the revenue at the indicated rate.

.16 Among various possible sets of such assets the actuary would consider

default-free assets of appropriate duration,

fixed income assets of appropriate duration, and

assets which are expected to be acquired.

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

Acceptable range

- .03 Variability in the circumstances of cases is significant and calls for a significant variation in assumptions among cases. Usually, therefore, the actuary who is familiar with the circumstances of a case makes the best selection of assumptions for that case. Two actuaries, each familiar with the circumstances of a case, may select different assumptions for that case. That is acceptable if the range of their selections is appropriately constrained by standards of practice.
- .04 In other words, the crux of the matter is the selection of assumptions appropriate to a particular case from the relatively wide range of assumptions applicable to all cases. A relatively narrow range of assumptions among actuaries is secondary to the selection of appropriate assumptions.
- .05 Sometimes, however, it is desirable that actuaries produce results within a relatively narrow range that the profession and the public perceive to be reasonable and consistent. It is then appropriate for the profession to supersede the actuary's selection by a prescription in the practice-specific standards that is within the range of assumptions otherwise considered acceptable.

Circumstances of the case

- .06 An assumption about a matter would take account of the circumstances of the case if those circumstances affect that matter.
- .07 The circumstances of the case affect experience on most matters other than economic matters.

Familiarity with the case

- .08 In selecting assumptions, the actuary would have knowledge of the case. That may involve consultation with the persons responsible for the functions that affect experience.
- .09 For example, if the calculation is to value the assets or liabilities of a benefits plan, then the actuary would consult the persons responsible for investments, administration, and plan provisions. If the calculation is to value the policy liabilities of an insurer, then the actuary would consult the officers responsible for investments, underwriting, claims, marketing, product design, policy dividends, and policy servicing.

Past experience data

- .10 The available and pertinent past experience data are helpful in the selection of assumptions.
- .11 Other things being the same, pertinent past experience data are data
- relating to the case itself rather than to similar cases,
 - relating to the recent past rather than to the distant past,
 - that are homogeneous rather than heterogeneous, and
 - that are statistically credible.

Usually, however, those criteria conflict with each other.