

Note: This version of ASOP No. 17 is no longer in effect.
It was superseded in 2002 by ASOP No. 17, Doc. No. 087.

**ACTUARIAL STANDARD
OF PRACTICE
NO. 17**

EXPERT TESTIMONY BY ACTUARIES

**Developed by the
Expert Testimony Task Force of the
Specialty Committee of the
Actuarial Standards Board**

**Adopted by the
Actuarial Standards Board
January 1991**

(Doc. No. 029)

TABLE OF CONTENTS

Transmittal Memorandum	v
------------------------	---

PREAMBLE

Section 1. Purpose, Scope, and Effective Date	1
1.1 Purpose	1
1.2 Scope	1
1.3 Effective Date	1
Section 2. Definitions	1
2.1 Actuarial Assumption	1
2.2 Actuarial Literature	2
2.3 Actuarial Method	2
2.4 Actuarial Opinion	2
2.5 Actuarial Standard of Practice	2
2.6. Data	2
2.7 Expert	2
2.8 Material	2
2.9 Testimony	2
Section 3. Background and Historical Issues	2
3.1 Increasing Exposure	2
3.2 Public Confidence	2
Section 4. Current Practices and Alternatives	3
4.1 Range of Issues	3
4.2 Forums	3
4.3 Modes	4

STANDARD OF PRACTICE

Section 5. Analysis of Issues and Recommended Practices	5
5.1 Review of Standards	5
5.2 Conflict of Interest	5
5.3 Advocacy	5
5.4 Identity of Client	5
5.5 Others Affected	5
5.6 Compliance with Laws and Regulations	6
5.7 Responsibility for Data	6

5.8	Actuarial Assumptions	6
5.9	Method of Analysis	6
5.10	Projection and Adjustment of Trends	6
5.11	Review of Other Relevant Testimony	6
5.12	Interviews or Other Proceedings with the Media	7
Section 6. Communications and Disclosures		7
6.1	Background of the Audience	7
6.2	Written Reports	7
6.3	Oral Reports and Testimony	7
6.4	Disclosure of Pertinent Information	7
6.5	Inherent Uncertainty of Results	7
6.6	Cross-Examination	8
6.7	Conflicting Testimony	8
6.8	Consistency with Previous Statements	8
6.9	Discovery of Error	9
6.10	Nature of the Forum	9
6.11	Deviation from Standard	9

January 1991

TO: Members of the American Academy of Actuaries and Other Persons Interested in Expert Testimony by Actuaries

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice: *Expert Testimony by Actuaries*

Background

The purpose of this standard is to guide members of the actuarial profession in giving testimony as actuarial experts. Testimony as an actuarial expert witness may be given in public forums including administrative or legislative hearings, judicial or extra-judicial proceedings, and interviews or other proceedings of the media.

The standard should be reviewed in the light of the *Guides and Interpretative Opinions as to Professional Conduct* promulgated by the American Academy of Actuaries. The *Guides and Opinions* address ethical issues; the standard addresses proper professional practice by an actuary in the special situation of providing expert testimony.

The standard was developed by the Expert Testimony Task Force of the ASB Specialty Committee. It was exposed as an exposure draft in March 1990, with a comment deadline of June 1, 1990. Forty-two comment letters were received. These comments are addressed below.

Responses to Comments on Exposure Draft

Numbers before the comments refer to subsections of the standard. The task force responses to the comments are printed in **boldface**.

1.2 Scope—The scope of the standard is too broad. **The reference to communications to third parties was eliminated, as being too broad.**

The exposure draft indicates that the standard does not extend to ethical issues, but it does. **This reference was eliminated.**

The standard should be limited to *formal* testimony, and should not include the media. **Interviews or other proceedings with the media frequently do not**

permit strict adherence to this standard. Nevertheless, the actuary should realize that remarks in such situations may be perceived or characterized as expert testimony, and the actuary should be guided by this standard to the extent practicable in the circumstances. This element of the standard was retained.

A definition of *third party* should be included in the standard. **References to this term were eliminated from the final version.**

Explain the difference between *actuarial expert* and *material witness*. **The sentence containing a distinction between these terms was deleted, making definitions unnecessary.**

2.1 Actuary—It may be appropriate to include actuaries who are members of the Society but have not joined the Academy. **The limiting definition of an actuary was removed from the standard.**

2.2 Actuarial Assumption—An actuarial assumption could be continuous, discrete, or binary.

The phrase *or other actuarial choices* is unnecessary. Define *other actuarial item*.

The task force made no changes in this definition, maintaining the broad scope contained in the exposure draft.

2.3 Actuarial Literature—The definition appears to omit periodicals. **The definition now includes *journals and the like*.**

The definition appears to include texts on economics and finance written by non-actuaries for non-actuaries. **The definition of *actuarial literature* is intentionally broad and extends beyond material written by actuaries to include all material from which an actuary may draw learning and experience.**

2.5 Actuarial Opinion—Expand this section to make clear that guidance includes matters related to the legal environment—for example, an actuary giving an opinion about a pension plan's compliance with integration regulations. **The task force recognized that there are situations, like the one cited, where actuaries may give expert testimony in matters that may appear not to be directly related to “traditional” actuarial matters. After careful**

consideration of this suggestion—and keeping in mind the broad range of this standard, the desire to avoid a lengthening of the range of issues in subsection 4.1, and a general caution about appearing to be offering legal advice—it was decided not to list this particular area of practice in the final standard. The task force does believe that this standard would apply in an expert witness situation involving the area cited.

- 2.6 Actuarial Standards of Practice—This definition should be expanded to include standards which are not codified but are nonetheless applicable. **This definition has been expanded in the final standard.**
- 2.7 Data—*Data* include answers to yes or no questions. **The definition of *data* was altered to reflect this and related comments.**
- 2.8 Expert—This section could include an expanded definition of *qualification*. **This definition was expanded, reflecting comments like the one cited.**
- 2.9 Materiality—The definition in the exposure draft seems to be one of sensitivity rather than materiality. Materiality is determined by whether a change is significant to interested parties, not on the extent of the change.

While this paragraph defines *materiality*, the concept does not receive extensive discussion in the remainder of the draft.

The task force considered these comments and decided to change the definition to that of the adjectival form, *material*.

- 2.10 Testimony—This definition should be restricted somewhat to exclude participation as a panelist or speaker at Society of Actuaries (SOA) meetings or similar public forums. **The task force debated the issue of whether comments at such public forums were an appropriate subject of this standard. To the extent such public statements are made in forums mentioned in subsection 4.2, this standard applies. In general, the typical SOA meetings, where an individual may make statements as a panelist or other speaker, are not considered to be forums covered by this standard.**
- 3.1 Increasing Exposure—Increasing public exposure is vague motivation for such a standard. **The task force respectfully disagrees with this suggestion, believing it is a suitable motivation for this standard.**

- 4.1 Range of Issues—Shorten the list and state that the list is for the sake of illustration and not intended to be complete.

The list should be expanded to cover the entire range of practices.

The task force agreed that the list contained redundancies, and concluded that it would be impractical to list all possible issues that could be the subject of expert testimony by actuaries. The items in the exposure draft list were combined into a shorter list, adding only the reference to multiemployer withdrawal liability assessments (item j).

- 4.2 Forums—Depositions should be included. **A reference to *depositions* was included in the final standard.**

The application of this standard to dealings with the media should be eliminated. **See comments and response, subsection 1.2.**

- 4.3 Modes—The standard should be limited to formal settings that would be recognized generally as being “expert testimony.” **Please refer to comments under “forums” in subsection 4.2.**

The standard says testimony may be oral or written. It should say that if the actuary testifies to the results of computations, a written demonstration is required to be made available to all sides of the controversy. **While agreeing with the thoughts expressed by this commentator, the task force is mindful that the nature of the forum does not always permit the actuary to offer written testimony. In revised subsection 6.3 of the final standard, the task force added the statement that the actuary “should be prepared to document oral testimony.”**

5. Analysis of Issues and Recommended Practices—The standard should include a section stating that before accepting an assignment as an expert witness, the actuary must be satisfied that the actuary is qualified. **The task force agrees that this is good advice to an actuary undertaking an expert testimony assignment, but notes that this concept is dealt with in Interpretative Opinion 5, and decided not to duplicate that in this standard.**

- 5.1 Review of Standards—This standard should state that all standards of practice relevant to the subject at hand apply to the actuary giving expert testimony. **The revised language of this section focuses the actuary on the need to be knowledgeable about “other relevant standards of actuarial**

practice.”

The requirement to maintain notes on the review of this standard should be eliminated. **This requirement was eliminated from the final standard.**

- 5.2 Conflict of Interest—The actuary should declare whether the report being presented has been prepared on an unbiased basis, or whether the actuary is serving one party or the other. **The task force believes that this particular requirement is not necessary in an expert testimony situation, as long as the actuary follows the other tenets of this standard. (See also subsection 5.3, Advocacy.)**

This standard should be consistent with the *Guides* on the matter of appearance of conflict of interest.

The “appearance” of a conflict of interest can sometimes be as damaging as an “actual” conflict. Therefore, the actuary should be directed to air any conflict of interest—potential or actual.

The task force chose not to distinguish between the “appearance” of a conflict of interest and an “actual” conflict of interest. Rather, the actuary is instructed to disclose any conflict to the interested parties.

A reader could conclude that an actuary is precluded from testimony when a conflict of interest exists. This is not true, as long as the conflict is disclosed to all parties. **The task force agrees with this observation that testimony may be given in a conflict-of-interest situation, as long as the appropriate disclosures are made to all interested parties.**

- 5.3 Advocacy—This section permits the actuary to serve as an advocate and expert at the same time. The two roles are often incompatible. An expert witness must be objective, and an “advocate” is not objective.

The statement is not strong enough. It needs to address the duty of an actuary to abandon advocacy if it might lead to improper behavior.

While not agreeing with the first comment above, the task force has rewritten the language of this section. The task force recognizes that advocacy, conducted in an appropriate professional manner, is an integral part of much expert testimony.

- 5.4 Identity of Client—The standard should be modified to reflect the possibility of

multiple users with conflicting interests. **The task force agrees with this observation, but believes that the singular construction in this context clearly encompasses the plural.**

One commentator questioned that the ultimate obligation is always to the client of the representative, and not just to the representative (attorney). **The task force respectfully disagrees with this observation and concludes that—while the client's representative typically plays an important role in the expert testimony situation; and many times may be the only contact the actuarial expert has with the ultimate client; and many times also actually pays the actuary's fees—the interests the actuary represents are those of the ultimate client, and not those of the client's representative.**

- 5.5 Others Affected—The fundamental obligation to tell the truth belongs in a separate paragraph, rather than in 5.5.

The obligation to tell the truth should include the obligation not to mislead by omission.

The actuary's obligation is to tell the truth within the forum [in which the actuary] is testifying.

Truth is elusive, as is evidenced by the diverse opinions which may arise from opposing experts. The actuary's obligation is to provide disinterested, objective expert testimony.

Reference to public interest should be omitted. It is not for the actuary to attempt to anticipate public interest beyond the laws currently in force.

The actuary has no obligation to the public interest if it conflicts with the client's interest and the law.

It is not clear whether the actuary has a duty to volunteer information if withholding that information compromises the “truth.”

The task force amended the paragraph in question so as to emphasize the obligation of the expert witness to “present a valid opinion” and to “express truthfully the facts underlying” that opinion. The reasoning behind this change was that when a witness swears to “tell the truth, the whole truth, and nothing but the truth,” the “truth” consists of the facts

of the case, including actuarial assumptions used and techniques applied in order to reach an opinion. An opinion itself is not the truth, but the expert giving an opinion must be in a position to respond truthfully, as well as affirmatively to the question, “Are you reasonably certain of your opinion?”

The task force is mindful of the other comments offered. The concept that others may be affected by the outcome of some proceeding in which an actuary testifies as an expert has been expanded in the language of the final standard. Other than that, the task force believes that the language of the exposure draft captures the essence of the actuary's general responsibilities to those who may not be direct parties to the matter at hand.

- 5.6 Compliance with Laws and Regulations—This is a weak statement. An actuary should avoid being involved in such situations. **The language of the final standard has been strengthened to reflect this observation.**
- 5.7 Responsibility for Data—The actuary is not always responsible for selection of the data. **In response to this observation, the task force has changed the standard to indicate that the responsibility of the actuary is not one of “selecting the data,” but one of “identifying the necessary data,” for an assignment.**

The standard should also address the responsibility of the actuary to obtain as much material as is practical upon which to base an opinion. Materials should be inventoried and retained. **In line with the removal of the requirement to maintain notes on the review of standards made in connection with an expert testimony assignment, the task force was reluctant to add an instruction which is viewed as principally administrative, or procedural, in nature.**

- 5.8 Actuarial Assumptions—**Although no specific comments were addressed to this subsection, the task force added language recognizing that actuaries offering expert testimony often are required to perform additional calculations in certain forums, using assumptions and methods that may not necessarily be those of the actuary's own choosing. In these situations the actuary should be careful to note that these calculations do not represent the actuary's own expert opinion.**
- 5.9 Method of Analysis—The term *actuarial literature* should be replaced with

actuarial standards of practice. It is not possible to check *all* literature.

Actuarial literature is not always available.

If this paragraph were intended to prohibit something, it fails to do so.

The task force agrees with the thrust of comments that researching all actuarial literature to determine if some technique(s) *may*, or may not, be contained in the literature is an unnecessarily extensive exercise. Nevertheless, as the last sentence now states, the actuary should be prepared to show that the method used is valid under the circumstances.

- 5.10 Projection and Adjustment of Trends—The section is more properly handled in a standard relating to projection and adjustment of trends. **Because of the likelihood that an actuary offering expert testimony will have the testimony challenged, the task force believes that it is an appropriate procedure to review the results of one's calculations in light of all events that may have an impact on the calculations.**

Reference is needed to testing of actuarial methodologies. **The task force believes this concept is already embodied in the language of the standard.**

- 5.11 Review of Other Relevant Testimony—This should be limited to relevant testimony in the instant case.

The actuary should review other testimony in relation to the actuary's own testimony to be able to explain the difference(s).

The operational meaning is not clear. The actuary acting as a consultant to a counsel will look for each opportunity to discredit other expert's testimony and will educate the counsel accordingly. Does this standard imply that this is not appropriate?

The language in the exposure draft has been modified extensively in response to the comments received. The standard is not intended to place unreasonable limits on reviewing the testimony of others, as suggested in the third comment.

- 5.12 Interviews or Other Proceedings with the Media—**This new subsection was added, in response to many comments, as an explanation of the task**

force's belief that an actuary should be guided by this standard, to the extent practicable, when dealing with the media.

- 6.1 Background of the Audience—Placing the burden of assessing communication on the actuary is unmanageable.

Delete this section. The actuary should not be asked to guarantee that clients read and understand the material prepared.

This section appears to be in direct conflict with the typical instruction given by an attorney, which is to answer simply and truthfully. It is the other party's burden to understand the answers.

The task force has incorporated most of these observations into the language of the final standard.

- 6.2 Written Reports—The last sentence [of this subsection] should be deleted from the standard. **The task force, respectfully, retained all three sentences of the language in the exposure draft.**

- 6.3 Oral Reports and Testimony—The implication is that the actuary needs to know the intellectual level of each member of the audience. It is an invitation to complaints.

Actuary should be prepared to document oral testimony.

A more appropriate standard would be one that prohibits the actuary from using technical terminology to deliberately obscure issues.

The task force has incorporated the first two of these suggestions in the language of the final standard, and believes that the direction to communicate clearly and succinctly embodies the spirit of the third.

- 6.4 Disclosure of Pertinent Information—The actuary should be prepared to disclose all significant information “on demand.”

Testimony given as an expert should be clear about the nature and limitations of the actuary's assignment.

These points are made in subsections 6.2. and 6.4.

- 6.5 Inherent Uncertainty of Results—Some actuarial opinions involving only financial functions with contingent elements can be absolutely certain. Actuarial findings should be distinguished from actuarial opinions.

This section implies that all expert actuarial opinions involve matters of inherent uncertainty. This is not the case.

Instead of using the uncertainty principle, the principle of method-based results should be used. This means that the results depend on the methodology used.

A distinction needs to be made between calculations (not uncertainty) and estimates (uncertainty).

The uncertainty concept could better be expressed by wording related to *parameter risk* and/or *process risk*, and not to *range*.

The task force has reflected these comments in the language of the final standard by focusing on the need to address uncertainty in the context of forecasts. If an actuarial opinion does not involve a forecast, no discussion of uncertainty would be needed.

- 6.6 Cross-Examination—The first sentence is inappropriate. The balance of the section is good advice but not appropriate for a standard.

Whether or not an attack is unwarranted, an actuary should maintain a respectful and professional demeanor at all times.

The task force has incorporated the second of these suggestions into the language of the final standard.

- 6.7 Conflicting Testimony—**This new section was added, based on the comments of one writer, to suggest certain ways an actuarial expert can help bridge the gap in seemingly disparate and conflicting testimony. These ideas, while not exhaustive, were deemed worthy of inclusion in the standard to help increase the public confidence in the actuarial expert testimony and the profession. (See subsection 3.2.)**

- 6.8 Consistency with Prior Testimony & 6.9 Discovery of Error—**These two new subsections were added in response to suggestions.**

- 6.10 Nature of the Forum—**This subsection was reworded and expanded on the**

basis of some comments.

The task force and the ASB thank all those who contributed comments on the exposure draft.

This standard was adopted at the January 1991 meeting of the ASB by the affirmative votes of eight members. Mr. Corbett dissented, stating,

I support the promulgation of this standard as it applies to all the forums listed in subsection 4.2 with the exception of “interviews or other proceedings of the media.” I believe the scope of the standard should be restricted to testimony as that term is commonly understood. We should rely on the Academy's *Guides and Interpretative Opinions as to Professional Conduct* to guide actuaries' relationships with the media.

Expert Testimony Task Force

Steven A. Harrold, Chairperson

David T. Bunin

Harry M. Leister, Jr.

Robert J. Finger

Mary S. Riebold

Specialty Committee of the ASB

Jarvis Farley, Chairperson

Steven A. Harrold

Robert J. Myers

Philip D. Miller

Richard S. Robertson

Actuarial Standards Board

Walter N. Miller, Chairperson

Edward E. Burrows

Frederick W. Kilbourne

Gary Corbett

Harry L. Sutton, Jr.

Willard A. Hartman

Jack M. Turnquist

James C. Hickman

P. Adger Williams

ACTUARIAL STANDARD OF PRACTICE NO. 17

EXPERT TESTIMONY BY ACTUARIES

PREAMBLE

Section 1. Purpose, Scope, and Effective Date

- 1.1 Purpose—This standard provides guidance to the actuary undertaking an expert witness assignment. It is not intended to restrain unreasonably the selection of actuarial assumptions or methods, the communication of actuarial opinions, or the relationship between the actuary and a client or employer.
- 1.2 Scope—This standard applies to actuaries when they testify as actuarial experts or when they communicate actuarial opinions in a public forum.

This standard supplements the *Guides and Interpretative Opinions as to Professional Conduct* promulgated by the American Academy of Actuaries (AAA).

Nothing in this standard is intended to discourage reasonable differences of actuarial opinion, or to inhibit responsible creativity in advancing the practice of actuarial science.

This standard is intended to supplement other standards providing guidance for actuarial work. It applies specifically to actuarial expert testimony as such; reference should also be made to standards concerned with the actuarial substance of the assignment.

- 1.3 Effective Date—The effective date of this standard is April 15, 1991. For judicial proceedings, this standard shall apply to testimony in cases filed on or after the effective date.

Section 2. Definitions

- 2.1 Actuarial Assumption—The value of a parameter, or other actuarial choice, having an impact on an estimate of a future cost, or other actuarial item, under evaluation.

- 2.2 Actuarial Literature—Professional books, papers, journals, standards of practice, and the like that provide education or guidance for actuaries.
- 2.3 Actuarial Method—A procedure by which data are analyzed and utilized for the purpose of estimating a future cost or other actuarial item.
- 2.4 Actuarial Opinion—A conclusion drawn by an actuary from actuarial knowledge or from the application of one or more actuarial methods to a body of data.
- 2.5 Actuarial Standard of Practice—A statement, adopted by the Actuarial Standards Board, the Interim Actuarial Standards Board, or the Board of Directors of the AAA and binding on members of the AAA, that defines acceptable practices in actuarial work.
- 2.6 Data—Statistical or other information that is generally numerical in nature or susceptible to quantification.
- 2.7 Expert—One who is qualified by “knowledge, skill, experience, training, or education” to render an opinion concerning the matter at hand. (The quote here is from *United States Federal Rules of Evidence 702*. The full reference is as follows: “*Testimony by Experts*. If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise.)
- 2.8 Material—Resulting in an impact, significant to the interested parties, on the affected actuarial opinion.
- 2.9 Testimony—Communication of an actuarial opinion in a public forum.

Section 3. Background and Historical Issues

- 3.1 Increasing Exposure—Actuaries have provided expert testimony in various forums for many years. Expert testimony by actuaries has been increasing in frequency and scope in recent years. It is expected that this trend will continue, leading to increasing public exposure of actuarial experts.
- 3.2 Public Confidence—Competing actuarial opinions on the same issue have at times been so divergent as to raise a question about the reasonableness of one or both of the opinions. This question is particularly likely to arise when the basis for either

opinion is not soundly thought out and explained. On the contrary, actuarial opinions that are supportable and carefully prepared and explained, though divergent, can generate confidence in actuaries' competence to evaluate future contingent events. The focus of this standard is on the preparation and delivery of sound expert testimony by actuaries.

Section 4. Current Practices and Alternatives

- 4.1 Range of Issues—Actuaries may be called upon to give expert testimony concerning a broad range of issues, such as:
- a. Actuarial present values of retirement or other benefits
 - b. Actuarial values incident to a divorce
 - c. Adequacy or appropriateness of reserves, premium rates, pricing or underwriting procedures, or provision for administrative costs
 - d. Cost impact of claims-made or claims-paid financing
 - e. Cost impact of risk classification systems, tort liability decisions, or legislative/regulatory proposals
 - f. Lost earnings of a decedent or injured person
 - g. Malpractice alleged of an actuary
 - h. Relationships between risk and return on investments
 - i. Value of an insurance company or other entity
 - j. Withdrawal liability assessments under multiemployer plans
- 4.2 Forums—Actuarial expert testimony may be given in many forums, such as:
- a. Administrative hearings or other executive branch proceedings
 - b. Arbitration or other extra-judicial proceedings
 - c. Committee hearings or other legislative branch proceedings

d. Courts of law or other judicial branch proceedings, including depositions

e. Interviews or other proceedings of the media (see 5.12)

4.3 Modes—Actuarial expert testimony may be oral or written, direct or responsive, formal or informal.

STANDARD OF PRACTICE

Section 5. Analysis of Issues and Recommended Practices

5.1 Review of Standards—An actuary undertaking an expert testimony assignment should be knowledgeable about this standard, other relevant standards of actuarial practice, and the *AAA Guides and Interpretative Opinions as to Professional Conduct*.

5.2 Conflict of Interest—The actuary should be alert to the possibility of conflict of interest, and should disclose to the interested parties any conflict of interest. There is a conflict of interest whenever the actuary's objectivity, or duty owed to a client or employer, is impaired by competing interests.

If the actuary is uncertain as to whether a conflict of interest exists, the actuary should make full disclosure of the facts to all interested parties, and should come to a conclusion with recognition of those parties' opinions on the subject of the potential conflict.

5.3 Advocacy—There may be occasions when an actuary acts as an advocate for a client or employer when giving expert testimony. When acting as an advocate, the actuary should remember that reasonable assumptions, appropriate methods, and supportable opinions should be used.

5.4 Identity of Client—The actuary should identify the client or employer on whose behalf the actuary is to give expert testimony. The client or employer is usually a party to the proceedings at which testimony is to be given. Parties to such proceedings may be the shareholders of a corporation, the policyholders of an insurer, the electorate of a political jurisdiction, the employers who maintain a state fund, or another individual or group of persons. This client usually names a representative, such as an attorney or manager, to whom the actuary reports during the course of the assignment. Even though that representative may retain and/or pay the actuary, the actuary's ultimate obligation is to the client, and not to the client's representative as such.

5.5 Others Affected—The actuary's fundamental obligation when giving expert testimony is to provide the forum with a valid actuarial opinion. The actuary has the obligation to express truthfully the facts underlying the actuarial opinion. The actuary has this obligation not only to the client or employer, but also to others who may be directly or indirectly affected by the proceedings. These others may

include the client's opponent in a lawsuit, the current and potential policyholders in a rate hearing, the plan participants and their dependents in an employee benefit plan action, the creditors in bankruptcy court, or others.

There are times when the actuary who gives expert testimony has obligations beyond those to the direct participants in the proceedings. There is an obligation to the public to apply actuarial skills so as to promote the general welfare. There is an obligation to fellow workers to represent their work fairly and to give credit where appropriate.

- 5.6 Compliance with Laws and Regulations—The actuary must comply with applicable laws and regulations. If the actuary believes that a law or regulation conflicts with sound actuarial principles or practices, the actuary should comply with the law or regulation and should disclose the conflict, subject to the constraints of the forum.
- 5.7 Responsibility for Data—The actuary is responsible for identifying the data necessary for an actuarial analysis. The actuary may not be responsible for the validity of the data, but is responsible for reviewing the reasonableness of the data. The actuary should disclose any data limitations that might affect the results.
- 5.8 Actuarial Assumptions—The actuary is responsible for all actuarial assumptions used in an actuarial analysis (but see also subsection 5.6 concerning compliance with laws and regulations). The actuary should be prepared to conduct additional calculations in certain forums, when asked either by opposing counsel or the presiding member(s) at the forum. If such calculations are to be made using assumptions or methods different from those used in the actuary's own analysis, the actuary should make clear that the results do not represent the actuary's own expert opinion.
- 5.9 Method of Analysis—The analytical methods used by the actuary should be derived from the actuarial literature. If an alternative method is used, the actuary should be prepared to establish that the approach used is valid under the circumstances.
- 5.10 Projection and Adjustment of Trends—In projecting trends found in the data, the actuary should recognize pertinent data, events, and trends from other sources which may influence the projection of future experience. The actuary should also review the reasonableness of the projections.
- 5.11 Review of Other Relevant Testimony—The actuary is often permitted to review

other relevant testimony, including opposing testimony. The actuary should conduct this review objectively, in terms of the reasonableness of the other testimony, rather than solely in terms of whether it agrees or disagrees with the actuary's own testimony.

- 5.12 Interviews or Other Proceedings with the Media—Interviews or other proceedings involving the media frequently do not permit strict adherence to this standard. Nevertheless, the actuary should realize that remarks in such situations may be perceived or characterized as expert testimony, and the actuary should be guided by this standard to the extent practicable in the circumstances.

Section 6. Communications and Disclosures

- 6.1 Background of the Audience—The background of the audience should be kept in mind when testifying as an actuarial expert. Individuals who are unfamiliar with actuarial concepts may be unable to understand actuarial communications that presuppose basic actuarial knowledge, and may be unable to understand such communications if presented using terms or acronyms with which they are unfamiliar. The actuary should explain technical terminology and concepts so that they can be understood by the audience.
- 6.2 Written Reports—Expert testimony delivered by means of a written report should make clear the scope of the assignment, including any limitations or constraints. It should include descriptions and sources of the actuarial data, methods, and assumptions used in the analysis. It should express the actuarial opinions clearly and succinctly, and in a manner appropriate to the audience.
- 6.3 Oral Reports and Testimony—In delivering expert testimony orally, the actuary should express opinions clearly and succinctly, in a manner appropriate to the audience. In addition, the actuary should be prepared to document oral testimony.
- 6.4 Disclosure of Pertinent Information—An actuary giving expert testimony should be prepared to disclose all information that is significant and pertinent to the case at hand. Such information includes but is not restricted to the name of the client or employer, the actuarial methods used, the assumptions and support therefor, the names of persons doing the analysis, and any potential conflicts of interest.
- 6.5 Inherent Uncertainty of Results—Actuarial forecasts or projections have a degree of uncertainty because they are based on the probability of occurrence of future contingent events. One of the most important duties of an actuarial expert witness,

and perhaps the most difficult, is to convey the inherent uncertainty of actuarial estimates or forecasts. The actuary giving expert testimony should state that a forecast necessarily has a degree of uncertainty associated with it. The actuary should be prepared to explain the concept of such uncertainty, verbally or numerically, and to convey to the audience that the actuary's own expectations for future results are within a range believed to be acceptable to most actuaries.

- 6.6 Cross-Examination—The actuary must respond truthfully to questions posed during cross-examinations, but need not volunteer information that may be inimical to the interest of the client or employer. Under cross-examination, the actuary should explain and illustrate concepts and calculations in a professional manner. The actuary should not accept a narrowing of the actuary's field or background in an attempt to portray the actuary as inexperienced in an area where the actuary is a qualified expert. When confronted with an attempt to characterize an actuarial opinion as nothing more than a guess, the actuary should counter such a characterization, and not allow the concept of uncertainty to be used to discredit the validity of actuarial work and testimony.
- 6.7 Conflicting Testimony—At times, the opinions, assumptions, and conclusions expressed in expert testimony by others may conflict with those of the actuary. These situations may generate doubt in the minds of the audience as to which expert to believe.

If asked to comment on the differences in testimony, the actuary should do so factually. These comments may take a form such as:

- a. showing that the data currently available invalidate a key opinion, assumption, or conclusion of the other testimony;
 - b. showing that the two conclusions do not conflict as much as they appear to, or that the difference is not material; or
 - c. showing what kinds of data may become available in the future to support one or the other set of opinions, assumptions, or conclusions, including an estimate of the time needed to collect a credible body of such data.
- 6.8 Consistency with Previous Statements—When preparing expert testimony, the actuary should be mindful of statements the actuary may have made on the same subject previously. If the actuary employs different methods or assumptions in the current situation, the actuary should be prepared to explain why.

- 6.9 Discovery of Error—If, after delivering expert testimony, the actuary discovers that a material error has been made in it, the actuary has an obligation to make appropriate disclosure of the error as soon as possible.
- 6.10 Nature of the Forum—The nature of the forum for the testimony may dictate the need for flexibility in the application of this standard. In particular settings, the actuary may be prevented from commenting upon or disclosing matters contained in section 5 of this standard. However, in preparing for expert testimony, the actuary should review with counsel the recommended practices contained in this standard, and explain why these are appropriate.
- 6.11 Deviation from Standard—Deviation from this standard is acceptable if the actuary is able to demonstrate that the deviation was reasonable under the circumstances. Such deviation must be disclosed, subject to the constraints imposed by the nature of the forum.