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**PREFACE  
TO  
ACTUARIAL STANDARDS OF PRACTICE**

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## **PREFACE TO ACTUARIAL STANDARDS OF PRACTICE**

### **Perspective on Professions**

Most of the technical and service professions as we know them today developed in the nineteenth century. They initially depended on education through apprenticeship. Later, examinations and other qualifications were established by their professional organizations. These followed the patterns set earlier by the older professions, such as medicine and law. Central in value for these professions were personal service and ethical conduct. In newer professions providing technical and commercial services to industry and business, such as engineering and accountancy, emphasis soon came to be placed on the specialized knowledge and skills that defined the professional. Increasing employment of professionals in organizations raised issues of professional authority and independence.

The essential characteristic of a profession has come to be expertise in the area where professional services are performed. This requires setting of selective standards for admission to the profession, intellectual and practical training to acquire professional competence, and an organization to rest such competence. To ensure that professional services are delivered in a manner expected of professionals, it has become necessary to lay down canons of professional performance and behavior in work situations, as well as procedures for maintaining discipline.

Professional services have been performed in a variety of settings. The older professions, such as medicine and law, were carried on overwhelmingly by independent entrepreneurs, hedged around only with professional restrictions. Increasingly, however, these professions and especially the new professions, such as engineering and accountancy, have come to act largely in professional groups or as employees of business organizations. Professional services provided by business organizations are a means to the financial ends of such organizations. Professionals employed by a business organization share responsibility for their actions with the employer, whereas professionals in private practice bear their responsibility alone. Regardless of their employment status, professionals have a mandate from their profession to act in the public interest.

Standards of professional performance and behavior have been developed to meet the expectations of users of professional services, individual and corporate clients, governmental authorities, and the general public. Those seeking professional services turn for advice to professionals because of the trust they repose in the reputation and standing of the profession.

Written standards of practice have been adopted in order to articulate more explicitly a profession's commitment to expertise and conscientious service, to assure regulatory authorities that they can depend on the profession to act effectively in the public interest, and, more generally, to inform users of professional service of what they have a right to expect by way of professional performance and conduct. Written standards of practice coupled with written provisions for disciplining members are evidence that a profession is in control of its governance and is protecting the public interest. Written standards of practice can provide guidance for dealing with commonly encountered

problems. However, professional practice also has to handle new problems or non-routine situations; in such circumstances, recourse must be had to professional judgment and experience with related problems. That is the rationale for broad professional autonomy and the reason why standards of practice are written in general, rather than specific terms.

Standards of practice are needed not only for guiding professional performance in different settings, but also for ensuring high quality of professional services. High quality is maintained by continuously expanding the body of knowledge and skills on which the services are based and on communicating the new knowledge to the public. Standards also serve to assure the public that the profession imposes its canons of behavior not only with respect to knowledge and skills but also with respect to integrity, independence, and a commitment to quality service.

## **Background of Actuarial Standards**

Comprehensive standards of professional conduct are of relatively recent origin. The Society of Actuaries appointed a committee on Professional Conduct in 1954 with the charge to update the Society's *Guides to Professional Conduct*. These Guides dealt only with principles and precepts and were not intended to be construed as precise rules.

In 1956, the Conference of Actuaries in Public Practice published its *Code of Professional Conduct*, which provided additional guidance in the areas of relationships with the public and with other actuaries.

In December 1965, immediately after its formation, the American Academy of Actuaries issued its own, which covered the topics of (1) professional duty, (2) nature of the member's responsibility to the principal, (3) relationship with the principal, (4) impartiality and independence, (5) advertising and publicity and relations with other members, (6) remuneration, and (7) use of titles.

The Academy's Guides in their present format were adopted in November 1969. At the same time they were expanded by adding an Opinion on Relations with Other Actuaries. Other changes and additional Opinions followed on an ad-hoc basis.

To facilitate the development of uniform standards of conduct within the actuarial profession, a joint committee on professional conduct was created to coordinate activities among the professional conduct committees of each of the North American actuarial bodies.

The Academy's 1972 Guides and Opinions provided little direction in the area of actuarial standards of practice. In December 1972, the American Institute of Certified Public Accountants issued a comprehensive guide relating to audits of stock life insurance companies. This audit guide for financial statements of stock life insurance companies pointedly raised the need for specific actuarial standards for calculating life insurance reserves and related actuarial values, assuming generally accepted accounting principles.

The Academy responded in 1973 and again in 1974 by promulgating *Financial Reporting Recommendations and Interpretations* that provided guidance in selecting actuarial assumptions and methods for stock life insurance company financial statements. Subsequently, in response to a requirement of the National Association of Insurance Commissioners for a statement of actuarial opinion, the Academy promulgated *Financial*

*Reporting Recommendations and Interpretations* dealing with statutory financial statements of life and health insurance companies and property and casualty insurance companies. The Interpretations related largely to the applications involved. Other broad rules were raised with regard to actuarial standards for pensions, notably as the result of the Employee Retirement Income Security Act of 1974 (ERISA). In 1976, the Academy issued *Pension Plan Recommendations and Interpretations*, in which it was recognized that the wide variety of pension arrangements called for considerable flexibility, coupled with professional expertise.

In the 1970s, new types of life insurance policies were introduced with flexible benefits and premiums. Such policies did not fit into the classifications established in regulations and statutory provisions for valuation. At the same time, the economic climate had begun to change with rising interest rates and higher inflation. Market values of assets recorded large fluctuations while terminations of life insurance increased sharply. These instabilities raised concerns about the financial soundness of some companies, particularly with respect to the adequacy of their reserves. Interest-sensitive life insurance and annuity products and property and casualty loss reserves appeared to require special attention.

In these circumstances, it became clear that more elaborate guidelines for the calculation of actuarial reserves, as well as recognition of the effects of current cash flows, could be very helpful. All of these developments motivated recommendations for creating the specialty of the valuation actuary.

The Academy has also recognized the need for another type of standard, to prescribe the professional qualifications needed by an actuary to prepare and sign publicly required statements of actuarial opinion. These standards are published by the Academy as *Qualification Standards*.

## **Standards of Practice**

The groundwork for writing standards of actuarial practice was laid in the mid-1970s by the American Academy of Actuaries, as the umbrella organizations for United States actuaries. In the late 1970s, the Academy established the Committee to Study the Requirements of Professionalism and in July 1982 authorized the formation of a Task Force on Organizing Professional Standards of Practice. The work done by this task force and other actuarial groups culminated in a proposal to create an Interim Actuarial Standards Board (IASB). Similar to the boards set up in other professions, the IASB began functioning in the fall of 1985, with the understanding that its ability to manage the development of standards would be tested; if the test proved fruitful, a permanent, essentially independent, Actuarial Standards Board (ASB) would later be established within the American Academy of Actuaries, with representation from the several actuarial organizations. On July 1, 1988, through an amendment to the Academy's bylaws adopted by a vote of the membership, the ASB was created with the sole discretion to promulgate actuarial standards of practice.

The objectives of the Actuarial Standards Board have been detailed as follows:

1. Direct and manage the development of actuarial standards of practice by its operating committees in all areas of actuarial practice.

2. Expose and promulgate actuarial standards of practice within its sole discretion and pursuant to such procedures, as it deems appropriate, in all areas of actuarial practice.
3. Provide continuous review of existing standards of practice and determine whether they are in need of amendment, alteration, expansion, or elimination.

The current process for developing standards of actuarial practice is an outgrowth of the development work done by the American Academy of Actuaries and more particularly by the IASB.

The Academy addressed itself to the issues of quality of actuarial performance by promulgating standards of practice entitled Recommendations and Interpretations. These Recommendations and Interpretations provided guidance in particular areas of practice; they were not intended to be definitive except as to the general direction to be followed in typical situations.

The Academy also addressed itself to issues of professional ethics by promulgating standards of conduct entitled *Guides and Interpretative Opinions as to Professional Conduct*. The Academy continues to have responsibility for formulating Guides and Opinions.

The standards of actuarial practice being developed by the ASB will restate or reformat the Academy's existing Recommendations and Interpretations and will also furnish new standards of practice where none had been promulgated before. The standards will in effect indicate how fundamental concepts and methodological principles should be applied in a variety of circumstances and will take into account problems arising from limited information, time constraints, and other practical difficulties, as well as conflicts with regulatory or other restrictions.

Six areas of practice have been identified for purposes of developing standards. Each area has been assigned a separate operating committee, as follows:

Casualty Committee  
Health Committee  
Life Committee  
Pension Committee  
Retiree Health Care Committee  
Specialty Committee

In each area the proposed standards of practice are explored and formulated under the direction of the appropriate operating committee. These committees are encouraged to seek a wide range of ideas and views, such as consulting other committees within the profession. When the committee had developed a draft on this basis it submits it to the ASB; if accepted, the committee arranges for an exposure draft to be prepared, published, and distributed with an invitation to comment. Following the exposure process, the committee presents a final proposed standard to the ASB. When an exposure draft is not unanimously supported in committee, the minority views may be formally presented. Public hearings can also be held if deemed advisable by the ASB. The ASB is the final

authority in the matter of standards of actuarial practice and is responsible only to the membership of the American Academy of Actuaries rather than to the Board of Directors of the Academy.

The ASB has recognized that there are situations where actuarial work is done in response to controlling regulatory bodies or other professional organizations that have established rules or requirements that are not in accordance with generally accepted actuarial principles and practices, or that prevents an actuary from applying professional judgment.

To deal separately with these situations, the ASB has adopted actuarial standards of practice, where actuarial principles and practices can be followed; and actuarial compliance guidelines, where contrary rules or requirements must be observed.

The formats of both the actuarial standard of practice and the actuarial compliance guideline begin with a preamble that (1) summarizes briefly the purposes, scope, and effect date of the standard or guideline, (2) defines the special terms used as well as words and phrases used in a special sense, (3) gives the background and historical issues involved, and (4) reviews the current and alternative practices.

The key sections of both the actuarial standard of practice and the actuarial compliance guideline deal with (1) the analysis of issues and recommended practices and (2) communications and disclosures.

The analysis of issues and recommended practices are organized by major topics or issues. Emphasis is placed on the recommended practices being straightforward, clear, and concise.

Communications and disclosures may be required or merely suggested. Where appropriate, reference may be made to the Academy's *Guides and Interpretative Opinions as to Professional Conduct*. Special communications or disclosures pertinent to the subject of the standard or guideline and any applicable limitations are identified.

## **Principles and Practices**

Every profession starts with a body of knowledge and a set of principles for reasoning from such knowledge. These principles derive from a number of fundamental concepts and the rationale of methods used in the application of these concepts.

The fundamental concepts take the form of explanatory scientific theories and of precepts that provide a broad perspective for solving problems. Fundamental actuarial concepts include such basic theories and precepts as:

Individual Risk Theory  
Collective Risk Theory  
Utility Theory  
Time Value of Money

In its early deliberations, the IASB recognized that while these fundamental concepts and precepts had been discussed at some length in statistical, economics and actuarial literature, they had not been brought together as a base for reasoning and a guide to action. This fact moved the IASB in 1987 to commission the monograph *Fundamental*

*Concepts of Actuarial Science* under the auspices of the Actuarial Education and Research Fund (AERF).

In working out practical solutions of actuarial problems, we begin with the fundamental concepts and road perspectives and then make use of techniques that have their own scientific rationale; in other words, we rely on tested methodological principles. Such principles can frequently be expressed in different ways, which are called rules of calculation or techniques. Thus different techniques may be used in:

Testing Accuracy of Data  
Adapting Experience Data for Projections  
Developing Appropriate Assumptions  
Appraising Consequences of Alternative Courses of Action

In testing the accuracy of data, we have a choice of techniques such as confidence limits, the method of maximum likelihood, and Bayesian estimates or credibility theory judgments. In making projections we have a choice of extrapolating from past experience, developing values from a specific scenario, or evaluating the sensitivity of results to variations in the factors involved. The techniques relied on to adapt data for projections, and those used to develop appropriate assumptions, have much in common, the choice of a particular technique may depend on the degree of conservatism used.

With the revolution in computers and communication, new methods are being introduced and new state-of-the-art techniques developed. The scientific rationale of the new approaches needs to be constantly examined and restated.

Committees of the Society of Actuaries and of the Casualty Actuarial Society have also undertaken to review methodological principles and their impact on areas of particular importance for actuaries, such as valuation.

The current standards of actuarial practice take account of the relatively unchanging fundamental concepts and the rapidly changing techniques as applied to the increasingly complex problems of today's world. New standards of practice are currently being identified and defined to deal with a much wider variety of situations, but the multiplicity of circumstances encountered in real life and the pace of technology make it necessary to leave wide discretion for the exercise of individual judgment by the practicing actuary.

## **Quality of Actuarial Performance**

The quality of actuarial performance rests fundamentally on a mastery of the rapidly growing information and special skills needed to solve problems, as well as on sound business judgment based on experience. This applies not only to the traditional areas of life, health, and casualty insurance, pensions, and social insurance, but even more so to other financial security systems and related programs that involve diverse risks.

The information needed by actuaries includes a vast body of recorded observations on many kinds of risks, as well as the theoretical and practical understanding of how such risks operate. Observations of actual experience constitute the actuary's primary facts. Unreliable information frequently remains unquestioned and so

can be very harmful, whereas dubious assumptions tend to be challenged. Research provides the means needed to establish validity of factual information.

Among the essential skills required to solve actuarial problems is a practical perception of the range of probabilities of different risks and their interplay. This perception is customarily summarized in the form of basic assumptions or models, expressed preferably in mathematical terms. Models may be regarded as stepping-stones to theories that represent deeper and more general insights. In a rapidly changing world, it is necessary to keep abreast of the latest intelligence with respect to new data and new models or theories.

Projections and forecasts are indispensable tools for the actuary. They may be considered as a base from which future results are investigated or as a method for testing assumptions and models. In their simplest form, projections appear as extrapolations from past experience. When dealing with projections of future payments, the actuary's judgments have tended to rest on consciously conservative extrapolations because they involved various degrees of uncertainty as to future developments.

Frequently, projections are made simply to chart the most plausible futures within a given framework. They can, however, be based on more elaborate models that include numerous elements that can affect the outcomes under consideration, for instance, technological changes or greater volatility in some factors. More elaborate models have the utility of long-range speculations about a variety of developments. At some point in this kind of exploration, further allowances may be in order for unforeseeable developments as an element of greater conservatism.

The art of conjecture goes beyond assembling the most pertinent data from the recent past and beyond the framing of assumptions and models suitable for projections into the future. The actuary should always make sure that the results can be put to practical use, and must judge whether they apply only in particular circumstances and to whether further investigation is indicated. Alternative solutions can be developed obtain clearer perspectives.

Actuarial solutions must also take into account factors and influences in the business environment that cannot be quantified. Many situations involve value judgments and counter forces, as for instance in competitive strategies, in risk management, and in marketing. The operations of insurance, pensions, and other financial security programs are always subject to the constraints of the real world, so that to be truly effective actuarial solutions must perform well under these constraints.

## **Professional Conduct**

Issues of professional conduct emerge primarily in the actuary's relationship with clients, including employers. In all professional relationships, whether with clients, employers, or others, the actuary bears a responsibility not only for personal behavior but also for the good name of the profession. This latter responsibility was eloquently described by Francis Bacon as follows:



*I hold every man a debtor to his profession, from which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto.*

As a professional, the actuary is normally assumed to have the knowledge, skills, and judgment that persons who seek actuarial advice do not have. Actuaries are expected to provide counsel and service that are clearly in their clients' and the public's interest. Such counsel is best imparted in an atmosphere of mutual trust and confidentiality, a necessary condition for professional advice. Persons receiving such advice will have greater confidence if they know that the actuary is bound by canons of conduct developed and enforced by the actuarial profession.

In recognition of professional obligation to the public, canons of professional conduct impose stricter standards than those required by ethical considerations or by legal prescriptions. Professional conduct requires competence, integrity, objectivity of a high order, and a commitment to personal service. This is necessary to assure the public that it will receive the benefits of sound actuarial judgment on such important issues as the financial stability of insurance, pensions, and other benefit programs. Only qualified actuaries may be in a position to distinguish between acceptable and unacceptable advice in these complex problems. The responsibility for the soundness of actuarial advice is passed on from the individual actuary to the profession, since it is the profession that may be called upon to demonstrate that actuarial services are being delivered with competence, integrity, and single-mindedness. The profession can do this only if it has promulgated guides to professional conduct that are accepted by the rank and file and are enforced by adequate disciplinary procedures. All members of the actuarial profession thereby acknowledge the full extent of their professional duties to the public.

As the public's needs and expectations change, the actuarial profession must from time to time review its guides to professional conduct as well as its disciplinary machinery and bring them into line with current thinking.

## **Disciplinary Procedures**

The impact that written standards of actuarial practice and guides to professional conduct make on professional behavior depends mainly on their full acceptance as a professional norm and on their enforcement through disciplinary procedures administered by the professional organization. The professional behavior of established actuaries plays an important role in creating ethical values and styles for new actuaries. Written standards of practice provide a more tangible indication of what is expected by the public and regulatory authorities in the way of professional performance and behavior. The manner in which the profession responds to violations of written standards of performance and behavior is crucial to public confidence. Well-administered disciplinary procedures are clearly needed to demonstrate that the actuarial profession is in charge of its standards and thus able to protect the public.

A distinguished physician summed up this point by saying that "A profession is distinct from an occupation in that it has been given the right to control its own work." He added that only a profession can determine "who legitimately can do its work and

how the work should be done.” (Eliot Freidson, *The Profession of Medicine*. Chicago, University of Chicago Press.) The educational and other qualifications for admission to the actuarial profession indicate who may be qualified for actuarial work. Written standards of practice indicate how the work should be done. Enforcement of high standards of professional practice, as well as high standards of admission to the profession, are necessary to assure the public that professional autonomy operates to provide expert services effectively.

Bylaws of the American Academy of Actuaries and similar regulations of other actuarial organizations include articles that spell out in detail under what circumstances and how members may be disciplined for violations of standards of practice or behavior. Comprehensive written standards of actuarial performance and behavior tell actuaries that their responsibilities to the profession and the public are.

The Authority to consider and act on violations of standards of actuarial practice is vested in the Committee on Discipline of the Academy. Before the establishment of the ASB, most of the complaints reported to the Committee on Discipline related to alleged violations of conduct, rather than practices; with the establishment of the ASB, actuaries are obligated to follow specific standards of practice, as well.

## **Relationships with Other Professions**

Actuaries have long maintained close relationships with other professions. As far back as 1883, an actuary and an accountant formed a partnership that produced the first accounting firm in the United States. In many areas, business organizations have come increasingly to depend on multidisciplinary teams, involving several professions. Actuaries are now employed by accounting firms, management consultants, and providers of health services. They are working among others with lawyers in framing insurance contracts and pension documents; with physicians in evaluating medical risks; with statisticians on developing mortality, morbidity, and other rates of hazardous events; and with computer scientists in adapting programs for insurance, pensions, and other financial security systems.

Questions have been raised as to the proper role of the actuary as a partner, employee, or more generally, a subordinate in organizations directed by non-actuaries. Actuaries who are subject to being influenced in their judgment by their partners or employers may find themselves in awkward situations. They can resolve such conflicts in the light of the principle that their primary responsibility is to their profession and the public. When there is an overlap with similar responsibilities of other professionals, the issues must be approached without requiring any of the collaborating professionals to compromise their professional codes. Conflicts between business interests of a client and the public interest require all professionals to stand by the latter.

Actuaries may experience some difficulties with other professionals because they are perceived as members of a profession engaged in providing advice based on somewhat esoteric knowledge and skills. This imposes on them the obligation to cultivate the art of communication, both written and oral, in order to be better understood. The growth of new professions and sub-professions may result in activities overlapping those of actuaries, so that the actuarial profession is well advised to delineate the areas of

actuarial proficiency to the general public. Specific standards of practice covering such borderline areas of actuarial activity can be most helpful for this purpose.

*Edward A. Lew*