

LETTER FROM THE TASK FORCE CHAIRMAN

The overriding purpose of any profession is to meet a public need. People have medical, dental, educational, legal, spiritual, and other needs. The public's need for actuaries may be obscure and intangible, but it is profound and far-reaching. A toothache is perceived to be a more urgent problem than an imbalance between promises and resources in a national social insurance program, but neither toothache nor imbalance will be cured simply by the passage of time. Actuarial analysis is an essential ingredient of a sound solution to the social insurance problem, even as dental care is essential to curing the toothache.

The actuarial profession, like some but not all other professions, is grounded in a specific science. Actuarial science can help to ensure sound financing of private pension plans, of commercial insurance products, and indeed of any enterprise concerned about the uncertain financial consequences of future contingent events (i.e., risk). The public need for actuarial services thus goes well beyond those services now being provided. Current demand lags behind the public need, but the actuarial profession is beginning to recognize that the additional needs are actuarial, and must be met, preferably by actuaries. The demand will follow.

Actuarial science is substantially concerned with the uncertain financial consequences of risk, with the analysis of future costs. The actuary analyzes and estimates the probability that an event will occur, the cost if it does occur, and the time value of money in the meantime. This is the essence of actuarial science and the object of most actuarial work.

The actuary is not precluded, of course, from going beyond the foregoing core of actuarial science. Some individual actuaries, for example, may be well suited to conduct not only quintessential actuarial work, such as enterprise risk analysis and management, but also general management and beyond. But **the actuarial profession does have an obligation to define and occupy the field of actuarial science.** The public's need for future cost analysis will be best served by an ethical profession dedicated to meeting that need.

To date, the actuarial profession has done a reasonably good job of meeting public actuarial needs in insurance and pensions, which may be about one-quarter of the field defined by actuarial science. The current and future challenge to the profession is and will be to meet public needs in the other three-quarters of the actuarial field. This will require applications of actuarial science within the balance of the financial services industry, within other industries, and within government programs beyond the national social insurance programs. To achieve this, pioneer actuaries will have to be trained and qualified to provide the needed actuarial services. This will be difficult but not impossible. Although these actuaries will be exploring new territory, they will remain

solidly within the field of actuarial science, with which they are familiar from their previous work and training. Several of the actuarial organizations are working diligently and effectively to offer this new training to their members.

Many of the actuarial needs of the public, beyond those covered by traditional actuarial services, are either unmet or are being provided by people who may have limited or no understanding of actuarial science. On the other hand, some of these needs may be adequately met by people who, often without knowing it, are providing competent actuarial services. **There may be advantages to making room, within the profession, for all people who are providing competent actuarial services.** Governmental recognition of such people could follow the establishment of minimum entry qualifications for the profession, without disturbing the higher qualification requirements for recognition as, for example, a Fellow.

The foundation of this CRUSAP study and report has been the actuarial profession's challenge to identify and meet the actuarial needs of the public. (It should be made clear that in this report, references to "needs of the public" do not include any specific legal duty to the public, such as actuaries have to their clients.) The CRUSAP study and report is not the same as an inquiry based on the self-interest of the actuarial profession and its organizations, individual actuaries, or their employers. Instead, it is an internal study to evaluate how actuaries can continue and expand their function of meeting the actuarial needs of the public. This entails asking questions: Should the purpose of the actuarial examination process be to prepare applicants to till the length and breadth of the actuarial field or to train highly specialized experts in just a relatively few crops? Should the individual actuary learn enough about social insurance programs to be able to speak out credibly on behalf of non-voters such as immigrants and the unborn? Should the structure of the profession serve primarily the needs of the public, and only secondarily the needs of actuaries and their employers? This foundation of considering first and foremost the actuarial needs of the public has made answering these and other questions much easier, and has generally facilitated the course of this study.

Actuarial education, examination, and qualification standards currently are all controlled almost entirely by the U.S. actuarial profession itself. There are advantages to this system. **Since the syllabus and exams are prepared by actuarial volunteers with full-time regular jobs, they tend to reflect current and practical considerations, which prepares the student well for immediate, productive employment.** Indeed, most actuarial students work full time in actuarial positions during their actuarial education, thereby gaining the benefits not only of cash income but also of the apprentice system of a bygone era. The actuarial exams are rigorous and objective, with each exam typically requiring hundreds of hours of study to gain a passing grade. Low pass percentages make them even more difficult to pass (of all actuarial exams ever taken, most were failed), and the whole process is made harder yet by having to pass five to ten or more exams under these conditions. What emerges at the end of this difficult process is someone who is willing to work extremely hard and who knows a great deal about what is current and practical in the tilled quarter of the actuarial field. The process also yields a collegiality among actuaries that goes well beyond any class ring or secret handshake. Some would

say that this is beneficial for actuarial ethics and professionalism since the tempted actuary will usually think twice before risking censure by, and exclusion from, the fellowship by shirking his or her professional and ethical obligations. Finally, the exams are substantially free of the political bias and gender discrimination that have plagued other exam systems, past and present.

There are also disadvantages to the current U.S. system. **Since the syllabus and exams are prepared by actuarial volunteers with full-time regular jobs, they tend to reflect current and practical considerations, which may prepare the student poorly for employment in a changing environment.** They are not always inclusive of the latest theories in other fields. Most other professions, and the actuarial profession in most other countries, use universities to educate and examine prospective actuaries. Volunteers may be more likely than education professionals to design exam questions with ease of grading as one criterion, and thus to encourage memorization at the expense of reflection. Further, the so-called “travel time” to becoming an actuary is substantial, causing many qualified prospects to turn to other professions that will permit them to “get on with their lives.”

The solution to the actuarial education problem may have several facets. The first and most important may be to establish and support the concept of actuarial science as a true science with all attendant responsibilities, such as devotion to verifiable truth and adherence to the scientific method. The current actuarial education organizations are working hard and effectively to improve their offerings. They may find that substantially increased use of alternative systems, such as universities and online courses, will improve actuarial education, and perhaps the actuarial exams as well, at least for basic actuarial science. Qualification standards for admission to the actuarial profession could use attention, as discussed above, and maintaining active membership in the profession could also require continuing education at an acceptable level. It will also be important for the profession to continue its efforts to reduce the redundancies and inefficiencies in this important area of actuarial education.

Ethics has been much in the news lately, largely in reaction to its conspicuous absence in some business and political quarters. While the locus of ethics is to be found exclusively in the individual human heart, its foundation can be poured and hardened by institutions such as parents, religions, and professions. Reference was made above to the exam bonding that has helped prevent leaks in the ethics foundations of actuaries. Perhaps partly as a result, ethical standards have generally been a hallmark of the actuarial profession. The organizations charged with educating actuaries have recently added ethics courses to their curricula, presumably to beneficial effect. The ascendancy of peer review requirements can, if grounded in ethical considerations as well as avoidance of error, also contribute to elevation of the ethical foundation of the profession. **This report will make a positive contribution to actuarial ethics if its foundational question takes hold within the profession: “Does this proposed action, or inaction, further or impede the goal of meeting the actuarial needs of the public?”**

It is important to the credibility of the actuarial profession that the standards and discipline bodies be transparent and essentially independent of the actuarial organizations. These bodies should operate primarily in the public interest and only secondarily in the interest of the profession, rather than the other way around. To that end, it may be appropriate to enhance the independence of the professional regulation boards and to provide a role for people who are not actuaries in the process of standards and discipline.

A major challenge to practitioners of actuarial science is to convey the uncertainty that is a persistent side effect of actuarial estimations, without at the same time eroding justifiable confidence in the actuarial work product. This challenge is made more difficult by the fact that the recipient of the actuarial conveyance is usually not a scientist and thus may fail to understand that an expression of uncertainty is not necessarily an admission that one is lazy or incompetent. This heightened challenge may appear insurmountable to many actuaries, but it must be met if the actuary's good work is to be not only delivered but also received and understood. The actuarial profession can help deal with this challenge by promoting the concept of actuarial science and by supporting the proposition that all science is built on a foundation of uncertainty, along with other attributes. Research can also investigate the causes of statistical and other uncertainty in actuarial work, and the most effective means of measuring and conveying that uncertainty. Expanded research is also needed if the profession is to move into new actuarial fields.

There is a means by which actuaries can gain valuable communication skills, particularly in the important area of communicating actuarial concepts to a lay audience, while at the same time helping to fulfill an important actuarial need of the public. **This is by doing sufficient individual research to qualify the actuary to understand and convey basic actuarial information about important issues,** such as a national social insurance program, a state bond proposal, or a local pension plan.

There are several good reasons for the continuation of the current structure (or lack thereof) of the U.S. actuarial profession. The profession is small but diverse, and each of the organizations serves a purpose for its members that might otherwise be overlooked in a monolithic organization. These organizations are working hard, and with some success, to augment and improve the services they offer to their members and the public. Arguably, free markets and competition are generally more productive and efficient than central control and coercion. Finally, several attempts over the past few decades to consolidate the U.S. actuarial profession have all failed, and urgent problems with feasible solutions take precedence over tilting at windmills.

There are also several good reasons for the current structure to be changed. The actuarial needs of the public may be better served by a profession that is not fragmented and parochial. Actuarial volunteer time is spread too thin, with much of it concerned with redundant functions, and even more with trying to coordinate or compete intramurally. Finally, actuaries often think of themselves primarily as members of a special-purpose

organization and only secondarily, if at all, as members of a public profession charged with identifying and meeting public and private actuarial needs.

The CRUSAP Task Force, composed entirely of U.S. actuaries, has concluded that **the U.S. actuarial profession should give serious consideration to changing its structure**, along with thorough review of the functioning of the existing structure. The maxim “first, do no harm” should apply to the process of any resulting reorganization. Feasibility considerations should never be ignored, but a condition precedent to any mutually acceptable reorganization will be to transform inertia, one of the most powerful forces on earth, into momentum. One approach to the question that might work is to hold a convention to thoroughly explore whether there can and should be a consolidated or unified actuarial profession and, if so, to determine an effective means of achieving that end.

The purpose of this letter has been to highlight and briefly discuss the key issues facing the U.S. actuarial profession. The purpose of this report, and of the study that supports it, has been to identify and analyze these issues, and to draw conclusions and then to make recommendations for consideration by the profession. As these issues are considered over the months ahead and beyond, especially by the CRUSAP Response Team set up by the North American Actuarial Council, the profession is encouraged to keep firmly in mind both its purpose and its needs. The two are inextricably interwoven as we move together into the actuarial heartland, the future.