A CRITICAL REVIEW OF THE U.S. ACTUARIAL PROFESSION

A DRAFT REPORT
FOR THE U.S. ACTUARIAL PROFESSION
AND OTHER INTERESTED PARTIES

PREPARED BY THE CRUSAP TASK FORCE
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FOREWORD

This Critical Review of the United States Actuarial Profession (CRUSAP) is the result of a presidential task force established at the May 4, 2005, meeting of the Board of Directors of the American Academy of Actuaries. The report reflects the work that has been done over the ensuing months, and is intended to present and support the conclusions and recommendations that have resulted from that work. The purpose of the report is to identify, and suggest ways to address, the risks and opportunities facing the actuarial profession as it strives to meet the actuarial needs of the public. Further information about CRUSAP's history is available in Appendix A.

The seven members of the CRUSAP Task Force, all actuaries, bear total responsibility for the report and alone are responsible for its content, including its conclusions and recommendations. Further information about the CRUSAP Task Force is available in Appendix B.

Numerous people, both actuaries and others, have helped the Task Force in its study and in the preparation of this report. Dr. Mindy Reiser, the project manager of CRUSAP, deserves special recognition in this regard. Kevin Cronin, the Academy's executive director, also deserves recognition for his invaluable assistance with the CRUSAP project.

The Task Force has also been fortunate to have a distinguished Advisory Panel to provide comments and suggestions relative to the issues raised by the Task Force. The Panel consists of 30 individuals, of whom a dozen are not actuaries. Further information about the Advisory Panel is available in Appendix C.

The Task Force's extensive database has included actuarial and other literature bearing on the subject, including reports of several actuarial organizations and communications from various interested parties. The Morris Review concerning the U.K. actuarial

profession has been a particularly useful reference, as were related and other international actuarial reports. Also useful were more than 1,400 CRUSAP survey responses and more than 80 interviews by Task Force members and others. Further information about the interviews is available in Appendix D, about the survey in Appendix E, and about the literature in the database in Appendix F.

The remainder of this CRUSAP report consists of the Executive Summary, six report sections, the Task Force Chairman's Letter, a baker's dozen recommendations, and seven appendices.

The purpose of this draft report is to permit actuaries and other interested parties to provide comments and suggestions to the Task Force. That input will be carefully considered in the preparation of the final CRUSAP report, which will be completed in December 2006.

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EXECUTIVE SUMMARY

In May 2005, the American Academy of Actuaries launched the Critical Review of the U.S. Actuarial Profession (CRUSAP). A presidential task force was established, and a chairman was appointed; the task force was later expanded to five, and finally to seven, actuaries, including the chairman. The CRUSAP Task Force was aided by a project manager, authorized by the Academy Board of Directors, and complemented by a 30-member Advisory Panel, composed of 18 actuaries and 12 non-actuaries. Intellectual input to the CRUSAP Task Force was provided by the 1,413 responses to the CRUSAP surveys for actuaries and non-actuaries, more than 80 interviews conducted with a broad range of individuals knowledgeable about the profession, and an extensive body of relevant literature, including the Morris Review of the actuarial profession in the United Kingdom.

Foundational to CRUSAP was assessing how well the actuarial profession is positioned to serve the needs of the public. This theme orients and frames the discussions in the review's six sections: (1) actuarial needs of the public, (2) education and training, (3) ethics and professionalism, (4) oversight and regulation, (5) actuarial communications, and (6) structure of the profession.

Section I. Actuarial Needs of the Public

Introducing the review's overarching theme, *Actuarial Needs of the Public*, Section I asks: What tasks are actuarial, what does the public really need from actuaries, and who should be included in the term "the public"? The areas of actuarial practice currently occupying most actuaries are generally found in insurance contexts, retirement programs, and health care — sectors in which actuaries focus on pricing, reserving, and forecasting. Users of actuarial services responding to the CRUSAP survey generally recognized the critical role actuaries play within these traditional fields but largely viewed the scope of actuarial activity rather narrowly, defined by their specific actuarial needs. Some actuaries shared this perspective as well, viewing the parameters of actuarial practice as defined by the traditional areas of practice, while others saw the field as defined by a broader view of actuarial science ("the quantification, analysis, and management of future contingent risk and its financial consequences") and, therefore, as potentially going well beyond these traditional areas.

The review sets forth arguments favoring the expansion of actuarial horizons to encompass additional areas in which actuarial expertise and experience can benefit the public. The business world is rapidly evolving, and it is critical for actuaries to broaden their knowledge base to meet newly emerging professional demands and to gain appropriate recognition. Actuaries have already expanded their activities into such areas as investment research and advising, retirement plan administration, and complex modeling involving future risk. Actuarial health care services now encompass measurement of health problem frequencies and severities, as well as relative efficacies

of treatment. The profession is increasingly focusing on enterprise risk management, along with other emerging areas of actuarial practice.

Potential areas for expansion of the profession include retirement planning for individuals, additional dimensions of health care analysis, further work in the financial sector, as well as tort reform and terrorism risk analysis. There is also the potential for actuarial services to be provided well beyond the traditional actuarial industries and applications, primarily by means of the new actuarial discipline of enterprise risk management. The review concludes that an expansionist view of the parameters of the profession is essential. Failing this, the profession will find itself left behind, with other professions stepping forward to meet actuarial needs as best they can.

The review considers whether expansion of the profession should be led by the professional organizations or would better be left to individual actuaries. The review concludes that synergy between the two is vital, even if individual actuaries are the first to identify and enter new professional areas. Professional actuarial organizations have a pivotal role to play in expanding the reach of the profession through providing tools, education, and promotional support. Actuaries should be assertive in calling upon their professional organizations to monitor emerging business trends and disseminate this knowledge to the profession.

The review underscores the importance of the very highest levels of actuarial professionalism to optimally serve the public. Well-honed communication skills are crucial, but only 3 percent of the survey respondents said actuaries communicated “very well.” The review concludes that the professional societies must make continuing technical education available to their members and require them to update their actuarial skills.

The review notes the potential for conflict between direct users of actuarial work (employers or clients) and indirect users (plan members, insureds, and regulators) and observes that the actuary must be mindful of such possible conflicts. The CRUSAP Task Force believes that actuaries need to consider their responsibility to all the stakeholders, direct and indirect, who rely on their work — a responsibility highlighted in the Code of Professional Conduct (though this does not imply any legal duty in this regard).

The review explores the question of greater actuarial visibility and contribution to public discussion of social programs and relevant policy issues. While actuarial input in educating the public and advising policy-makers could further recognition of actuarial expertise, it also carries the risk of attribution of bias to the profession and the need for a sophisticated appreciation of the political landscape. The review supports greater actuarial participation in public discussion on relevant social insurance issues and other germane areas, and maintains this would benefit the public. It recommends that individual actuaries be encouraged to gain sufficient knowledge to speak out on major actuarial issues. While not all actuaries would want to engage in such activities, the professional societies should provide the objective factual material necessary for those

actuaries so inclined to speak in diverse settings. This will facilitate enlightened public discussion of public policy issues with actuarial elements.

Section II. Education and Training

The review affirms that actuarial professional education and the actuarial examination system are the two cornerstones of the profession. Actuarial basic and continuing education are occurring in a dynamic environment — evidenced by the evolution in capital markets and risk financing, greater volatility in financial markets, increased complexity in product design, and the movement to principles-based supervision. The supply of actuaries in the United States is expanding; the demand for traditional actuarial services is also expanding, but at a somewhat lower rate than the supply. In this dynamic environment, the review argues, the actuarial profession needs to structure its preparation of new actuaries to respond to the emerging challenges, not just traditional ones.

It is particularly important for actuaries to strengthen their understanding of financial economics, an area in which professionals from diverse backgrounds are increasingly active. Globalization provides both opportunities and challenges for actuaries — leading to increased outsourcing of actuarial services as well as opening new international markets for U.S. actuarial services.

The review considers the contrasting perspectives on the desired direction for U.S. actuarial education — that actuaries should be educated to meet current market needs vs. the call for educating actuaries for the demands of the future. Proponents of the former approach felt that actuaries need to be prepared to meet traditional actuarial responsibilities — developing rates, performing reserve functions, and providing actuarial statements of opinion. In this view, the current actuarial examination system, with its rigorous testing process, well prepares young actuaries to meet the current demands placed on them. Proponents of the current examination system believe that the present self-study path develops independence and strong self-education skills in aspiring actuaries, enabling them to move into new areas with the persistence and motivation necessary to acquire the needed knowledge.

While 65 percent of the CRUSAP survey respondents saw basic actuarial education as either good (45 percent) or excellent (20 percent), critiques of the current system include the following: excessive “travel time” to exam completion; need for greater emphasis on practical considerations; too-frequent syllabus changes. Advocates of change in basic actuarial education felt that the current examination system was geared more to the training of actuaries than to their education. With a focus on problem-solving to address narrowly defined issues, the exam system is seen as channeling people to a very specialized skill set, rather than enabling them to develop a more generalized knowledge base and diversity of skills.

The CRUSAP Task Force considered the role of the university in preparing young men and women for actuarial careers. The review identifies a particular strength of the university lying in its utilizing the expertise of educational professionals in contemporary educational theory to design actuarial education, as well as in expanding the actuarial

core knowledge base to reflect broader educational content. Further, university-based actuarial science classes expose students to theoretical issues at the core of actuarial work. This preparation would enable students to address actuarial issues transcending conventional boundaries. The review recognizes that attainment of actuarial competence requires immersion in the specifics of actuarial practice. Some university-based actuarial science programs do provide such opportunities for their students both in classroom work and through internships. It should also be noted that the American Society of Pension Professionals and Actuaries (ASPPA) works with a major university in designing its education and examination procedures.

The review recommends that the actuarial profession identify and promote actuarial work as a science and charges the actuarial organizations with the responsibility of implementing this effort. The review recommends increasing the use of the university system to educate and perhaps to examine prospective actuaries, if only through basic education and examination. The review proposes including communication skills and ethics training within university-based actuarial education and as part of the examination process. It suggests retaining limited actuarial control over university-based actuarial education, perhaps by means of a university accreditation process and through syllabus and examination approval.

The review calls upon the boards of the actuarial learned bodies to define and defend the value proposition of fellowship in their organizations — i.e., what characteristics, skills, and core knowledge fellowship in the organization represents. These qualities should reflect the public needs and responsibilities that actuaries of the future would be called upon to fulfill. The identification of these needs would then lay the foundation for the specific design of the educational system.

The review finds that the current structuring of the syllabus in preparation for the actuarial examinations should be broadened to include expanded use of web-based modules (already undertaken by the Society of Actuaries and the Casualty Actuarial Society), seminars, academic papers or theses, and an on-line university. The current examination process itself should also be redesigned to allow for appropriate testing of such capabilities as model simulation skills.

Addressing the issue of continuing education, the review notes that 28 percent of the respondents to the CRUSAP survey found the profession's continuing education offerings to be either fair or poor — in contrast to the 14 percent of respondents who found basic actuarial education to be fair or poor. Complaints against the current continuing education process cited its voluntary approach (with some actuarial bodies mandating continuing education requirements, and others not), minimal requirements, inadequate delivery vehicles, and failure to emphasize new developments and ideas.

The review concludes that actuaries have significant educational needs that are not being met and that to assure ongoing actuarial competency in a dynamic environment, actuaries need to spend an adequate number of hours in professional development. Accordingly, the review recommends that all members of the actuarial profession be required to meet

consistent continuing education requirements—with continued active membership in professional actuarial organizations contingent on meeting triennial requirements. The review encourages the use of alternative delivery systems for continuing education and consideration of independent research conducted in the course of actuarial assignments as a qualifying continuing education activity. Additionally, the review recommends "making a home" somewhere within the actuarial profession for all persons doing competent actuarial work. The designations for these individuals would vary according to their level of competence and would be determined on the basis of either specialized exams or other types of qualification.

Section III. Ethics and Professionalism

The actuarial profession in the United States substantially self-regulates its members' ethical and practice standards in the development and delivery of work products and actuarial opinions. The Code of Professional Conduct (Code), which includes provision for Actuarial Standards of Practice (ASOPs), is the foundation of this effort. The Code, which was adopted in its current uniform state by the five existing U.S.-based actuarial organizations in January 2001, is the primary tool employed in measuring professional responsibility and in helping the Actuarial Board for Counseling and Discipline (ABCD) identify actuarial misconduct.

Through its analysis of the CRUSAP survey results, as well as the interviews conducted, the review determines that the Code is highly regarded by U.S. actuaries and is an example of successful collaboration among the country's actuarial organizations. Survey respondents do express some uncertainty about how the Code is actually applied in the discipline context, and express a desire for public notification of explicit facts relating to violations. Some actuaries fear that divulging specific details of actuarial malpractice might provide guideposts to those wishing to operate within the narrowest margins of professional responsibility. The review notes that actuaries, and others performing actuarial functions, who are not members of any of the actuarial organizations fall outside the requirements of the Code and the ABCD, and recognizes that an advantage of including such individuals within the profession would be that they would thereby be subject to the standards and discipline of the profession.

The review observes that ASOPs, currently 42 in number, are designed by the Actuarial Standards Board (ASB) to provide specific guidance on generally accepted actuarial practice. The CRUSAP Task Force addresses the divergent viewpoints on the most appropriate future role for the ASOPs. Should the ASOPs serve as a consensus on generally accepted practice or as a vehicle to raise the bar on acceptable practice? Could the ASOPs serve both purposes simultaneously? Some actuaries think the ASOPs should define "best practice" as contrasted to "generally accepted practice." This "best practice" approach, others note, would elevate one approach over all others and might dampen the search for alternative approaches. Actuaries also differ in the degree of practical guidance they seek from ASOPs on matters of professional ethics and judgment.

The review calls on the profession to accept the nature and value of principles-based standards. The conflict between "generally accepted" and "best practice" should be

resolved through practice notes, issue briefs, and task forces, as needed. The profession is challenged to raise the bar of generally accepted practice, while not adding inappropriate liability for professionals doing competent actuarial work.

The review finds that it is critical for the profession to use the ASOPs, practice notes, and other appropriate resources in a timely manner, in order to incorporate into actuarial practice advances in actuarial science and related professions. Absence of such a rapid response could well weaken the profession in an increasingly competitive marketplace. The review concludes that the actuarial profession should seek the counsel of representatives from other related professions when identifying and developing ASOPs. The ASB, the review further states, should continue to seek outside commentary on the current body of ASOPs and identify a body of subject-specific external advisory panels whose comments would be required as part of the exposure process.

The review addresses the issue of conflicts of interest faced by practicing actuaries. Actuaries are subject to pressures from their clients seeking to influence their findings, and varied stakeholders often have divergent interests. The review concludes that the actuarial profession should provide more guidance on conflict of interest with which actuaries could counter pressures from their clients, and that it should strengthen actuarial support of Precept 1 of the Code.

To foster understanding of the nature of actuarial work—with the uncertainty inherent in its practice and its focus on risk—as well as to recognize actuarial professionalism and ethics, the review calls for the actuarial profession to actively engage and partner with other relevant professions, as well as to encourage greater public outreach.

Section IV. Oversight and Regulation

The system of oversight and regulation of actuaries in the United States consists of multiple elements: (1) direct government oversight in the case of enrolled actuaries; (2) indirect oversight by state insurance regulators through their regulation of insurance companies, including review of insurance company reserves and rates; and (3) oversight and discipline provided by the Actuarial Board for Counseling and Discipline and its five participating organizations.

Enrolled actuaries are the only U.S. actuaries subject to direct government regulation, through the Joint Board for the Enrollment of Actuaries (Joint Board) — the body authorized to accredit EAs to perform services under the Employee Retirement Income Security Act of 1974 (ERISA*).* The Joint Board, whose five members are appointed by the Secretary of the Treasury and the Secretary of Labor, also conducts disciplinary proceedings.

Through their reviews of the adequacy of insurer reserves and the rates and supporting loss data in some insurance lines, state insurance regulators provide indirect oversight on actuarial work for insurance companies. The National Association of Insurance Commissioners, in its Actuarial Opinion and Memorandum Regulation, under certain circumstances allows the state regulator to disqualify actuaries providing life insurer

reserve opinions from filing future opinions. Similar oversight applies to dividend illustration actuaries. In most areas of actuarial work, however, regulators do not have explicit authority to disqualify actuaries.

The review observes that regulators have expressed some frustration with their inability to address poor-quality actuarial work, which they may, occasionally, encounter. State regulators rarely use their regulatory authority to disqualify life actuaries from doing reserve opinions. In the case of property/casualty actuaries, regulators rely on the actuarial profession's self-disciplinary process to disqualify an actuary. Regulators are also generally reluctant to submit complaints to the ABCD because of the potentially negative impact on pending litigation or on other aspects of the regulatory process. The review finds that regulators view the oversight and regulation of actuaries as increasingly important in light of the movement to a more principles-based valuation system in the life insurance industry.

The review concludes that the actuarial profession should expand its outreach to familiarize regulators with the Code and the ASOPs. The review proposes exploring the feasibility of the following legislative or regulatory changes: enable the Joint Board to share confidential information with the ABCD; enable the ABCD to share confidential information with state and federal regulators; and create stronger whistle-blower protections for actuaries and non-actuaries who report violations of actuarial standards, laws, or regulations by others. The review also suggests that consideration be given to whether a federal licensing system would be desirable if Congress enacted optional federal charter legislation.

The review devotes considerable attention to the role and function of the Actuarial Board for Counseling and Discipline. The ABCD has authority to consider and investigate complaints or other information suggesting possible violation of the Code of Professional Conduct. It may also counsel actuaries concerning their activities, respond to requests for guidance, or mediate to resolve issues. It does not, itself, impose discipline, but rather makes recommendations for disciplinary action to its sponsoring organizations. It has been relatively uncommon for the ABCD to recommend discipline, with most of its cases resolved by means of counseling.

The review observes that disciplinary actions vary across the different ABCD sponsoring organizations, each of which has its own distinct internal processes. This organizational diversity has occasionally resulted in different disciplinary outcomes for the same infraction. Determination of whether to make the disciplinary information public is left to the membership organizations, with ABCD maintaining the confidentiality of its investigations and deliberations.

While ABCD has done extensive outreach and education in recent years — publishing case studies and other material — the review finds that awareness of the diverse functions of ABCD appears to be a problem. There is a widespread perception that ABCD is not receiving complaints on many situations involving Code violations. Both regulators and actuaries report a reluctance to file complaints with the ABCD. The review notes that a

self-regulatory process cannot be effective if those involved in the process are unaware of problems in the profession and underlines that it is particularly important that the actuarial profession be proactive in identifying violations of the Code. To address this concern, the review calls for considering the development of a system of automatic triggers for review of an actuary's work, such as an insurer insolvency. It also calls for increased follow-up when discipline or counseling has been imposed.

To strengthen the profession's self-regulatory processes, the review recommends that professional regulation of actuaries should be substantially independent of the national actuarial organizations. It proposes creating a new board that will discipline actuaries on behalf of all the organizations. ABCD, the review suggests, should continue its current role but be renamed to emphasize its counseling and investigation roles. Further, the review recommends that professionals who are not actuaries be given a role in the standards and discipline process through membership on an Actuarial Oversight Board charged with overseeing the Actuarial Standards Board, the ABCD, and the new disciplinary board. These boards would all be composed exclusively of actuaries, except that the oversight and new disciplinary boards would have a significant proportion of non-actuaries.

The review also calls for joint approval of the board budgets by the presidents and presidents-elect of the sponsoring organizations, and increasing the transparency of the per capita fees supporting the boards by itemizing these charges separately on the dues notices of the participating organizations.

Section V. Actuarial Communications

In considering actuarial communications, the review focuses on several distinct but inter-related areas: communications between actuaries and users of their services, communication activities by the actuarial profession, and visibility of actuaries and the actuarial profession to the general public.

In the CRUSAP surveys, about 75 percent of the actuarial respondents thought that users of their services have a reasonable or better understanding of the nature of these services, including the uncertainty of actuarial conclusions, while only 55 percent of non-actuaries felt that actuaries do an acceptable or better job of communicating the nature of actuarial work and its inherent limitations. A significant majority of actuaries and non-actuaries interviewed by the Task Force saw a need to improve the communication skills of actuaries in order to better deal with users of their services.

Communication challenges faced by the actuarial profession include the predisposition of many actuaries to object-oriented rather than people-oriented communications; the limited mathematical skills of many users of actuarial services; and the focus of busy executives on the bottom line of actuarial responses rather than the supporting details and caveats of actuarial work. Further, users of actuarial services often do not have a thorough understanding of actuaries' education, training, professionalism, standards, and discipline procedures. Many users of actuarial services do not realize the constraints placed on actuaries by regulations, accounting requirements, and the potential for

litigation. They also often do not comprehend the magnitude of data, assumptions, and effort that may go into producing a single value or range of values.

The review concludes that actuaries' oral and written communication skills are in need of improvement. Greater communication facility would reduce misunderstandings of actuarial work, lead to increased appreciation of actuarial services, and allow the actuary to better serve the needs of the user. The review proposes that the profession require training or a demonstrated proficiency in oral and written communication skills as a prerequisite for credentialing actuaries. Such competencies could be acquired through courses at academic institutions, actuarial exam syllabus materials, and participation in programs offered by organizations dedicated to training public speakers. Such training could also be made part of an expanded pre-fellowship and/or pre-associateship training program.

The review calls on the profession to develop and encourage continuing education training in communication skills through such frameworks as the Qualification Standards, through which credit would be allowed for communication training. The review further proposes that continuing education requirements designate a minimum number of hours, periodically, for maintaining and enhancing communication skills.

Communication efforts by the profession need to better inform users about the form and substance of the profession and, particularly, to educate regulators on actuarial professionalism, standards, and discipline. To enhance user understanding of the actuarial profession, the review proposes development of easy-to-understand brochures on such topics as the uncertainty inherent in actuarial estimates and projections, varied approaches to pension funding, and the responsibilities of the appointed actuary. Designing and organizing instructional seminars for users of specific types of actuarial services, such as insurance company directors and pension plan trustees, could also be an effective means of enhancing understanding of particular aspects of actuarial work.

The review explores the range and reach of communications the actuarial professional organizations direct at the nation's actuaries. Journals, newsletters, reports, monographs, study guides, manuals, issue briefs, and brochures are but some of the materials produced by the actuarial membership organizations, as well as The Actuarial Foundation, the ASB, the ABCD, and local and regional actuarial clubs and forums. In addition to the large volume of written materials produced and disseminated, many oral presentations are made at meetings, hearings, and interviews. Electronic communications (for example, websites, e-mails, audiocasts, webcasts, CDs, and DVDs) are also widely employed as information-dissemination vehicles.

The review finds a significant duplication of effort and expense in the volume of actuarial communications currently emanating from the various actuarial organizations, and points out that actuaries typically receive more communications from the profession than they can effectively use. CRUSAP research indicates that many actuaries and non-actuaries are unaware of the profession's current communication activities. Indeed, some CRUSAP survey respondents recommended embarking on communication initiatives that were

already underway by the profession. An unanticipated consequence of the profusion of actuarial communications may well be the diminution of the actuarial profession's effectiveness, as users of actuarial services perceive the profession as being unable to speak with a single voice.

To better utilize the actuarial profession's limited resources, the review recommends that the actuarial organizations develop an effective structure for coordinating communication activities, monitoring the information needs of the public, and establishing priorities. To this end, the review proposes that the profession contract with a communication research firm to study the efficacy of communication activities of the U.S. actuarial organizations. The study's objective would be development of a plan for the implementation of a profession-wide integrated communication program.

The CRUSAP Task Force considered the question of the appropriateness of communication outreach to the general public — people who do not directly use actuarial services or employ actuaries. Some actuaries feel that the general public does not know or care much about actuaries and that the profession's resources would be better used in targeting direct users of actuarial services. The CRUSAP Task Force believes that the actuarial profession has a responsibility to the general public and that increasing public awareness of the profession would better enable it to respond to the public's needs. To accomplish this, the profession should continue and expand its communication efforts in print and through public presentations to explain actuarial aspects of current national issues, such as Social Security, Medicare, and pension reform.

To enhance the profession's ability to simultaneously reach diverse audiences and expand public awareness, the review recommends developing a website on behalf of the U.S. actuarial profession. This nonpartisan outreach and communication vehicle would educate and inform users of actuarial services, potential users of these services, and the general public. It would cover a broad array of topics including areas of actuarial expertise; an explanation of actuarial terminology; a description of actuarial professionalism, standards, and discipline; and explanations of national issues having actuarial aspects. The website would describe and link to the relevant areas of the websites established by the actuarial organizations.

Section VI. Structure of the Profession

In attempting to assess the need for change in the actuarial profession to better serve the public, the CRUSAP Task Force believes it both necessary and appropriate to examine the organizational structure of the profession. The review notes the many changes in the organization of the profession over the past century with the creation of actuarial societies and associations, followed by mergers, dissolutions, and the establishment of new entities. The Casualty Actuarial Society was established in 1914, originally to serve the actuarial needs of the new insurance field of workers' compensation. The Society of Actuaries, created in 1949, was itself the product of the merger of the Actuarial Society of America (founded 1889) and the American Institute of Actuaries (founded 1909). In 1950, the Conference of Actuaries in Public Practice — now called the Conference of Consulting Actuaries — was established. The American Academy of Actuaries was

created in 1965, and the American Society of Pension Actuaries was established in 1966 (and in 2004 renamed the American Society of Pension Professionals and Actuaries). The process continues, with the formation in 2004 of the College of Pension Actuaries. After the enactment of ERISA in 1974, enrolled actuaries became part of the actuarial profession. While many enrolled actuaries joined the Academy, more than 200 do not belong to any of the U.S. actuarial organizations.

The review describes a number of the efforts undertaken since 1975 to streamline the actuarial profession. None of these efforts — initiated by such organizations as the Council of Presidents, the Society of Actuaries, and the Conference of Consulting Actuaries — was successful in effecting real reorganization, although some greater degrees of cooperation and coordination were accomplished, or at least attempted. Tensions of various sorts have been apparent among the diverse U.S. actuarial organizations, while diverse cooperative efforts have developed among them, as well.

Citing responses to the CRUSAP survey soliciting the views of actuaries on the current structure of the profession, the review notes that 34 percent of the respondents found the current structure an appropriate one, and 54 percent found it inappropriate. Among non-actuaries, 30 percent found the current structure appropriate, and 40 percent found it inappropriate. Interviews conducted by the Task Force addressed the issue of the profession's organizational structure, as well, and found that a majority of the interviewees found the current structure to be inappropriate.

The reasons given for maintaining the current structure include the following: multiple organizations are needed to serve the diverse needs of the profession, and consolidation might result in specialized needs being ignored; the actuarial profession is too broad and diverse to be consolidated effectively; the rise and continued existence of separate organizations is a function of market forces; the existence of multiple organizations provides competition among the organizations and improves services and effort; the forces opposed to consolidation are too powerful; and the profession would be wasting valuable time, resources, and effort it if were to attempt to consolidate.

The reasons given for consolidating the profession include the following: the actuarial profession is not large enough to support several different organizations; the number of organizations with overlapping areas of interest dilutes the pool of volunteers for a wide range of professional initiatives; the current organizational structure inhibits effective discipline of members of the actuarial profession; the current structure results in excessive time and effort spent by staff and volunteers in competition and coordination; the existence of multiple organizations represents a significant barrier to globalization of the profession and to presentation of the profession as a science; and the actuarial profession is under assault and needs to strengthen itself.

In evaluating the appropriate organizational structure for the U.S. actuarial profession, the review concludes that the basic functions of the professional actuarial organizations should encompass the following activities:

- Establishing qualification standards for actuaries
- Establishing appropriate member standards of conduct
- Establishing standards of practice for actuarial work
- Identifying public actuarial needs
- Administering discipline
- Educating new actuaries
- Overseeing and providing continuing education of established actuaries
- Providing opportunities for professional colloquy
- Representing the profession before governments, international bodies, and other entities
- Promoting and coordinating research
- Training actuaries in conventional and new applications of actuarial science

The review notes that the actuarial profession has already taken some steps to reduce the level of inefficiency generated by the existence of multiple organizations. The Working Agreement for the Actuarial Profession, signed in 1990 by the five U.S.-based actuarial organizations and periodically revised, has been an initiative in this direction. However, the review finds that the Working Agreement does not provide the means necessary to ensure efficient use of the profession's financial and human resources and notes that the Agreement does not include any enforcement provisions.

The review observes that virtually all the previous attempts to consolidate the organizational structure of the actuarial profession have come from the leadership level. This may be the case because the profession's leaders were the most acutely aware of the inefficiencies involved in attempting to coordinate activities among the multiple actuarial organizations. The review further notes that there has not been a grass-roots effort to consolidate the profession. The primary outward evidence to members of the inefficiencies of the current structure may well consist of the multiple dues and meeting costs that must be paid to several different organizations. This economic cost, however, is often not borne by the members themselves, since it is often paid by employers of actuaries. Further, the multiple organizations provide actuaries a number of opportunities to meet and discuss common interests with their professional peers.

After considerable deliberation, the CRUSAP Task Force concludes that it is in the best interests of the public to consider changes in the structure of the actuarial profession. The review finds that the current organizational structure of the profession results in a significant distraction to the profession's leadership at a time when it is facing unprecedented challenges in meeting the goal of best serving the public. The current structure, the CRUSAP Task Force believes, is also an impediment to an effective voice for the profession in the internationalization of actuarial practice and in maintaining effective discipline within the profession. The review, therefore, recommends that the leadership of the actuarial profession hold a convention in 2007 with the purpose of reviewing the organization and functioning of the profession, and to review the other recommendations in this report.

Recommendations

The key recommendation of the report is that a 2007 convention should be held to review the structure and functioning of the actuarial profession. The convention should also consider the following dozen recommendations, which are addressed in the following sections and set forth in detail in the Recommendations Section of the report:

- Adopt "meeting the actuarial needs of the public" as the motto and purpose of the actuarial profession.

- Define and defend the field of actuarial science as "the quantification, analysis, and management of future contingent risk and its financial consequences."

- Define and defend the value proposition for Fellowship by the board of directors of each educational organization.

- Increase the use of alternative delivery systems to educate and examine prospective actuaries.

- Require active members of the actuarial profession to meet consistent continuing education requirements.

- Investigate development of a website specifically directed at the users of actuarial services and the general public.

- Investigate retaining a firm specializing in professional organization communications to perform a study of the current communication activities of the U.S. actuarial organizations.

- In order to meet all the anticipated actuarial needs of the public, make a home somewhere within the actuarial profession for persons doing competent actuarial work who are not currently members of the U.S. actuarial profession.

- Explore the feasibility of enacting legislation to protect whistle-blowers, including regulators, and to permit sharing of discipline information, with safeguards.

- Encourage individual actuaries to gain sufficient knowledge to speak out on major actuarial issues.

- Establish professional regulation of actuaries that is substantially independent of the national actuarial organizations.

- Provide for participation in the standards and discipline process by professionals who are not actuaries.

I. Actuarial Needs of the Public

Introduction

This CRUSAP study, above all else, is concerned with assessing how well the actuarial profession is positioned to serve the actuarial needs of the public. Therefore, defining and agreeing on the "actuarial needs of the public" are critical to a successful completion of our Task Force's assignment.

- What tasks are actuarial?
- What does the public really need from actuaries?
- Who should be included in the term "the public"?

Let us first seek agreement on what constitute actuarial services. The closest to a consensus definition within the profession seems to be "quantifying, analyzing, and managing future contingent risk and its financial consequences." This definition in various forms was seen again and again in the CRUSAP Task Force survey of some 1,400 actuaries and non-actuaries. Clearly, the core of actuarial science includes the financial consequences of contingent risk.

Other definitions are in common use, as well. For example, the website www.beanactuary.org — an initiative by the Casualty Actuarial Society and the Society of Actuaries for prospective new entrants to the profession — says, "Actuaries are experts in: evaluating the likelihood of future events, designing creative ways to reduce the likelihood of undesirable events, decreasing the impact of undesirable events that do occur."

Wikipedia, the free on-line publicly written encyclopedia (www.wikipedia.org), defines an actuary this way: "Actuaries are business professionals who deal with the financial impact of risk and uncertainty."

These definitions all contain the common themes of future risk and uncertainty. For the purpose of this review, we can work with the first definition coming out of our survey. It draws on the actuarial science learned over years of study, plus the business arts also employed by actuaries.

Analysis

The areas of actuarial practice that occupy most actuaries today are generally found within insurance contexts, retirement programs, and health care. Pricing, reserving, and forecasting are all areas that most knowledgeable stakeholders realize benefit from significant actuarial involvement. Some actuaries and many current users of actuarial services feel that actuaries should focus their attention and energies primarily on these areas. For example, several users framed their responses about future needs entirely in

terms of current actuarial activities. Likewise, many actuarial respondents defined the public's actuarial needs in terms of insurance or pension systems only.

Our CRUSAP survey responses from current users of actuarial services suggested that they generally recognize the critical roles actuaries play within traditional actuarial fields, although many users seemed to be aware only of their own particular fields of activity. As extreme examples, one respondent defined an actuary as someone who is "a narrow-focused insurance rate maker," while another defined an actuary as "someone who prices future health expenditures."

The number of actuaries is modest, while the needs in traditional areas are substantial. This has been put forth as one argument for a circumscribed approach to the reach of actuarial work; actuaries should stick to doing what they do best. There are other types of professionals who specialize in other sectors of the economy, so it will be difficult (or perhaps impossible) for actuaries to expand services in those other areas, given the continuing needs in most traditional areas of actuarial activity. An actuary considering taking on new kinds of work has at least some obligation to ask himself or herself if there are other professions whose members could better meet the client's needs. Finally, all actuaries have an obligation to avoid undertaking work for which they are not qualified.

One needs always to try to discern not only the need but also the likely demand. Sometimes needs exist, but the demand has not yet made an appearance. In these kinds of situations, the profession must not squander existing limited actuarial resources where there is no demand. There are good contrary arguments that new demands are developing. There are areas of actuarial services where current users of actuaries often criticize them for failing to acquire a sufficiently broad business perspective. Most actuaries believe that the elements that underpin their profession can be applied broadly to serving the public interest in many new areas, especially if actuaries make the investment necessary to gain sufficient knowledge about these areas of potential practice.

It can be argued that a profession that fails to move forward with changing times is destined to become a footnote in history. Even within the traditional actuarial spheres of responsibility (insurance reserves, for example), the needs of the public are evolving and changing. Principle-based reserves, as an example, require up-to-date and forward-looking technical skills from the actuary. Several current users of actuarial services interviewed by the CRUSAP Task Force expressed concern that the business world is changing so rapidly that actuaries will not be able to keep up unless they continuously broaden their knowledge base.

One has only to look back to see important examples where actuaries have been shut out of areas where they might logically belong because the profession did not move aggressively enough. The result has been lost opportunity and the loss of bright young mathematicians and/or business thinkers who, instead of becoming actuaries, opted to join investment banking firms or become economists.

Both the public and the profession would seemingly be well served if the actuarial profession were to reach out to groups of individuals not formally affiliated with the profession but doing work that the profession deems to be actuarial. It may be the case that many or most such individuals should have some kind of formal affiliation with or within the profession. Such outreach by the actuarial profession could help to ensure that the profession continues to expand into emerging areas of actuarial practice. Also, the cross-pollination likely to occur would benefit all parties. Finally, individuals becoming part of the actuarial family would then be subject to the actuarial Code of Professional Conduct and applicable standards.

The opportunities for expanding the actuarial realm are, to some degree, in the eyes of the beholder. Already today, actuaries have expanded their activities into investment research and advising, into retirement plan administration, and into complex modeling involving future risks only indirectly linked to the financial sector of the economy. The profession currently is moving toward much greater involvement in enterprise risk management. The involvement of actuaries in health care now includes measurement of health problem frequencies and severities, and the relative efficacies of treatments, leading to conclusions about best practices.

Future areas identified as possibilities include other aspects of retirement planning for individuals, still broader participation in health care analysis and decision-making, and application of actuarial ideas and techniques to new areas within the financial sector. Expanded activity for casualty actuaries may be forthcoming in tort reform and the field of terrorist attack risks. Actuaries in Australia work in the field of climate change and emissions trading. Some U.S. actuaries have even dabbled in the area of weather futures.

If one favors expansion of the field, there is a question of whether such expansion should be led by the profession or left to individual actuaries. In the latter view, the profession and its organizations should not try to define ahead of the curve what new fields should become the purview of actuaries. Instead, let some individual actuaries first see the opportunities and begin working in these new areas. Then, the professional organizations should follow them into these areas and provide the education and support necessary for other actuaries to extend the reach more broadly. To some extent, it may be a “chicken and egg” proposition. Tools, education, and promotional support may sometimes be critical to the success of individual actuaries in expanding into new fields.

Whether one feels that actuaries should focus on traditional areas or should aggressively seek to expand their horizons, actuaries need to anticipate what the public will expect along the way. Responses to the CRUSAP surveys of actuaries and users of actuarial services seem fairly clear in this regard. Not surprisingly, true technical expertise and appropriate skills are an absolute must. Actuaries must understand the issues in areas in which they seek to serve the public. Education is key — leading-edge, usable knowledge must be acquired and kept up to date.

Second, actuaries must be better able to communicate with employers, clients, prospective users of services, and, on occasion, members of the general public. The best

technical work can fail to rise to the level of good service if it's communicated poorly. It is telling that nearly half of the users of actuarial services responding to the CRUSAP survey said that actuaries communicate less than adequately. Only 3 percent said actuaries communicate "very well." Many who deal with actuaries have recommended more training in this area.

A third proposal from many survey respondents and interviewees is that actuaries must speak out more if they want to be recognized as experts, especially in new or high-profile areas of practice. This idea is controversial. Many actuaries perceive a need for greater actuarial input into social programs and public policy discussions. These respondents suggested that there are needs for actuaries to:

- Advise policy-makers and legislators;
- Provide reliable cost information on existing or proposed programs;
- Educate the public on complex issues;
- Debunk spin;
- Enable us all to have more confidence in these programs and proposals (when these plans warrant confidence).

Those who advocate greater visibility suggest that as the profession becomes better known, the public and policy-makers will be more willing to recognize its expertise and will see the need for actuarial input.

At the same time, actuaries must recognize that greater visibility in areas involving public programs carries risk. Individual actuaries who speak out will most likely express their own points of view (or those of their clients or employers), and such expressions may cause the public to attribute bias to the profession as a whole. Further, large-scale, organized activity in this area can be quite expensive. Actuaries exhibit a wide diversity of opinions on most major public social program issues. Getting to a single public expression of even actuarial opinion has proven most difficult for the democratically organized actuarial profession.

Ultimately, there is no guarantee that those who would pass judgment on the future public activities of actuaries will be fair in their assessments. That risk is political reality, and the reputation of actuaries could suffer as a result. It can be quite risky to enter the political world unless one understands the larger political landscape, no matter what the needs of the public are.

In our surveys, interviews, and literature reviews, we have heard a range of opinions on how we should define our "public." One view is that our profession really has no generalized duty to serve the broad public at large. While clearly there is no legal duty to the public of a nature that would impose negligence or malpractice liability, those who espouse this view are not saying that the well-being of the general public is unimportant. Rather, they say that their primary obligation is to those who employ or hire them. If an actuary serves these direct stakeholders well in their pursuit of lawful, ethical goals, then

by extension the actuary will have performed useful service for the broader public affected by the activities of their employers or clients.

They also argue that few members of the general public really know what actuaries do, and fewer care. Some actuaries also attempt to make a distinction between those actuarial roles that have a public aspect (especially when involving certification) and those that are more limited or private. However, such a distinction may be difficult to draw for many types of activities.

The CRUSAP Task Force examined the potential for conflict between direct users of actuarial work (i.e., employers or clients) and others (e.g., plan members, insureds, regulators, and the like). We concluded that such potential indeed exists, and the actuary must be certain to fulfill his professional obligations in every aspect of practice. This responsibility is highlighted in the actuaries' Code of Professional Conduct. Precept 13 of that Code goes an additional step and requires that actuaries "blow the whistle," if necessary, should they encounter material, uncorrected violations of the Code by other actuaries.

Regulators, in particular, appear to be saying that if they are not able to rely on actuaries with confidence, they will devalue the profession and its opinions, perhaps entirely. A non-actuary who obviously had already made such a judgment said in his survey response that "actuaries cannot meet any [of my] needs at this time, as they use corrupt assumptions and they are for sale…." One regulator said he had encountered "extremely inadequate" loss reserve opinions. Fortunately for the profession, this view is distinctly in the minority, but it illustrates how the trust that actuaries seek and need may be lost and the actions of just a few could taint the entire profession.

Our research into current attitudes indicates that the majority view today among actuaries and users of actuarial services is that the public at all levels will expect the very highest level of professionalism from actuaries, if actuaries want to have respect and trust accorded to them and to the work they do.

There is one other way in which actuaries today serve the needs of the public that merits mention. Through The Actuarial Foundation and through the efforts of individual actuaries, there is operational today in many schools across the United States a very significant actuarial outreach program aimed at improving the mathematical and statistical skills of students. The lack of adequate math skills in students today has been well documented; it handicaps far too many young people, and it can plague them throughout life if it's not overcome.

Overwhelmingly, our survey respondents define "needs" of the public not so much in terms of practice areas or technical skills but in terms of the general public interest in the professional responsibilities of actuaries. The paramount need is for actuaries to be consummate professionals. Words such as "integrity," "reliable," "unbiased," "objective," "timely," "competent," and "clear communication" are found throughout the entire collection of responses whenever we asked about the paramount needs of the

public. More emphasis on research was also suggested. Some believe there are major sources of research funding that have not been tapped.

When all the adjectives applied to the actuarial professionalism are combined, it appears that put most simply, the greatest need of the public from the actuarial profession is for informed “straight talk.”

Conclusions

Based on our survey work, input from our Advisory Panel, other interviews, our literature review, and many discussions and debates within the Task Force, we have come to the following conclusions.

First, the public’s needs are evolving and changing. It seems essential that the profession and individual actuaries within the profession meet this evolution by actively pushing out the boundaries of the profession. To thrive, a profession must be constantly adding to its knowledge base. If actuaries do not seek involvement in areas that would benefit from an expanding actuarial skill set, others will step forward. The profession will find itself left behind, and the public will be a loser, along with the profession. It seems to us that an expansionist view of the profession should prevail. We further conclude that the profession should examine additional ways to reach out to groups of professionals doing work that the profession deems actuarial in those cases where the groups are not already formally members of the actuarial profession.

Second, the actuarial organizations should support forward-looking education and public relations efforts. In most cases, the first inroads into new areas will be made by individual actuaries, but the profession as a whole should be close behind with tools, education, and/or promotional support. Occasionally, the profession should lead the way. Actuaries should insist that their actuarial organizations be aggressive in keeping up with a wide variety of business trends and innovations and in sharing this knowledge with the body of actuaries. Not all developments will have implications for actuaries, and not all efforts to expand will succeed, but even a few successes may pay handsome dividends for both the public and the profession.

Third, both continuing technical education and communication training are critical to the future success of the profession. The former keeps the profession on top of its game and maintains the special skills and abilities the profession must have to best serve the public. The latter will build the skills needed to communicate actuaries’ good work to their publics — both experts and lay individuals. The actuarial organizations must make training available and insist that actuaries keep their skill sets up to date in their chosen practice areas.

Fourth, after considerable deliberation, we conclude that more actuarial participation in the public discussions on relevant social insurance program issues, plus other matters that rely in part on actuarial topics for their conclusions, is an activity that would benefit the public and is appropriate for the profession. Such participation must be done in an

informed and politically savvy way. In so doing, actuaries must strive to maintain objectivity. This is not an activity for all individual actuaries, especially when it involves providing testimony before public bodies, media interviews, or similar forums with wide exposure. For these activities, most people need initial formal training. However, actuaries will see many opportunities to speak up in smaller groups and less challenging contexts. It can be of great benefit to the public if actuaries can share informed opinions in these circumstances. The actuarial organizations must do their part to make factual, objective information on the issues readily available.

Today's world will encourage actuaries to take a broad view of the needs of the public. It is clear that the public expects actuaries to personify the highest levels of professionalism. The public expects integrity, competence, and objectivity. As summed up by one interviewee, "actuaries need to do their very best to *tell the truth!*" The education of the actuary must include sufficient ethics training to make this responsibility clear to all, and the discipline structure of the profession must deal firmly and fully with those (few) who stray from this dictate.

II. Education and Training

Introduction

Actuarial professional education and examinations are two cornerstones of the actuarial profession. As in other professions, the content of actuarial education is designed to meet the needs of the profession's stakeholders, who include investors, managers, regulators, and consumers. In the past, the actuarial organizations responsible for examinations have successfully met the needs of these stakeholders. Demand for actuaries has been strong. The actuarial reputation remains good.

Forces Driving Actuarial Services

Today, actuaries are in high demand. In the United States, regulatory requirements, such as the role of the appointed actuary, drive this demand. The actuarial organizations have been successful in preparing increasing numbers of actuaries to meet regulatory demands.

The regulatory supply/demand balance is not equal across all actuarial functions. Technology advances continue to make actuaries more efficient, with fewer actuaries needed to achieve the same productivity levels. Globalization is also beginning to expand the supply of actuarial services beyond the geographical boundaries of the United States. Economic principles of free trade will lead to more outsourcing of actuarial services, and the public's need for actuarial services is expanding. Leadership of the actuarial organizations is beginning to look for new markets for actuarial services in the areas of corporate finance, investments, predictive modeling, operational risk, and customer relationship management. New services, however, do not come without risk, and they require changes in the actuary's core knowledge.

Forces Driving Professional Competition

Actuaries are increasingly in competition with other financial professionals, particularly in areas where regulations do not require actuaries. Financial engineering, behavioral economics, and enterprise risk management are fast-growing fields in which actuaries can provide insight and technical knowledge. Competition will come from non-actuarial credentialed professionals (MBAs, PhDs, DBAs, PRMs, CPAs, financial engineers, modelers, financial risk managers, and chartered financial analysts). While these positions do not require actuarial credentials, actuarial skills are helpful in meeting the demands of these roles.

Forces Driving Actuarial Education

Basic education for actuaries is mentally strenuous and intellectually demanding. The examinations are written by current actuaries for future actuaries. Formal classroom attendance is not required, only attendance at the examination center. This opens the profession to many more students. It is a path of self-study from which the actuary acquires several defined values, including independence, dedication, persistence, and

motivation. This process develops strong self-education skills that enable actuaries to move into new areas of training and to acquire needed knowledge.

The education dilemma for actuaries is that current market demands for actuarial services are known, but the demands for future actuarial services remain unknown. Many members of our profession believe that actuaries should be trained to meet market demands for known technical services, as the current market demands are great. Other members think we also need to educate actuaries for the demands of the future, such as financial economics. The CRUSAP Task Force agrees that greater emphasis should be placed on the latter view, while acknowledging the need to adequately serve the former.

One danger to the actuarial profession is to be enticed by an expectation of stability in the current market and the actuaries' current knowledge base. Narrow views among members contribute to actuarial organizations' inability to react and change to a dynamic environment. The potential for professional entropy in a knowledge-based environment is real. As one colleague recently quipped, "Actuaries are moving toward knowing more and more about less and less, until one day soon they will know everything about nothing."

It is also necessary to be cautious in thinking that the current examination process is an effective and efficient educational system because of the current employability of actuaries. There is no guarantee that the current educational structure is teaching the right things for tomorrow's actuaries, nor is it certain that the actuarial organizations are efficient in the delivery of that education.

Organizations must challenge, restate, and rekindle their value propositions if they want to grow and prosper. The U.S. actuarial organizations are no different. The key issues surrounding actuarial education are the skill sets, technical tools, and education required for actuaries so that they can provide valued services to the users of those services and thus meet their needs. This is the value proposition for actuaries. Challenges to the status quo are not detrimental to actuaries. Recurring questions regarding educational requirements are designed to address the potential needs in new markets and the scope of services actuaries may provide in those markets.

We have split our analysis into two sections: basic education and ongoing education. The demands for each will vary with the recognition and design of the future market economy and the competitive forces within the insurance industry.

Analysis

Basic Education

Primary responsibility for the basic education of actuaries rests with the Society of Actuaries (SOA) and the Casualty Actuarial Society (CAS). Basic competency is demonstrated through the examination process. The professional development process generally consists of two approaches: education and training. Education is the building of knowledge from theory to a solution; training builds knowledge from practical, hands-on experience to a solution. Training is the most efficient way to obtain the skills needed to

respond to specific problems. Education may be less efficient and more individualized, but it's more effective in building a set of skills that can respond to more generalized issues or problems.

Training is both an efficient and effective mode of improving skill levels in a static environment but is less efficient in dynamic environments. Education may be more efficient in a dynamic environment where issues are more prevalent and a particular solution is just one of many options.

1. Knowledge acquisition frameworks. The amount of training vs. education depends on whether the environment is static or dynamic.

In a static environment, training often dominates over education. The characteristics of a static environment include: 1) long periods of stability; 2) a strong, centralized scientific core knowledge base; 3) a constant or at least predictable future; 4) well-defined problems and solution sets; and 5) rules (bright lines). Under this environment, "if...then" statements dominate the solution patterns. This is most often the worldview of a technician. Examination provides proof of competency.

Before the late 1970s or early 1980s, it is arguable that actuaries functioned primarily in a static environment. Since that time, however, the environment has become more dynamic, as evidenced by the evolution in capital markets and risk financing, greater volatility in financial markets, increased complexity in product design, and the movement to principles-based supervision. When the environment is dynamic, education dominates over training. The characteristics of a dynamic environment include: 1) periods of extensive, rapid innovation; 2) market-driven, economic/behavioral analysis central to the core knowledge base; 3) uncertain future; 4) uncertain questions and fuzzy solutions; and 5) principles-based regulations. Under a dynamic environment, regime recognition dominates the response patterns. A regime represents all the operational, economic, political, and social characteristics of a time period. This is the worldview of experienced managers and business leaders. In business schools, it is a core concept for the MBA curriculum and often represents the central idea behind books on business theory and strategy. Results provide proof of competency.

Currently, the actuaries' basic examination process tends to develop technicians. The current examination system provides detailed training exercises. Core knowledge skills are outlined in learning outcome statements, and success results in the appropriate problem recognition and use of learned solution sets. This approach quickly provides the actuary with the greatest detail regarding procedures, information, facts, correlations, relationships, model designs, and practical skills. It is very applicable to operational processes where solution sets are specific to the data set and a series of primary questions.

The perceived value of this examination approach among actuaries is apparent from the CRUSAP survey results. In question 15 of the CRUSAP survey for actuaries (see Appendix E), 65 percent of the respondents thought that basic actuarial education was

"good" (45 percent) or "excellent" (20 percent), with an additional 18 percent rating the process as "adequate." Only 14 percent of the survey respondents thought the examinations "fair" (11 percent) or "poor" (3 percent).

To retain the high level of actuarial skills expected for Fellowship, more and more material is being added to the syllabus, but little is removed. The expansion of core actuarial knowledge would naturally lead to the downside of increased travel time required for attaining Fellowship. In general, the complaints against the current examination process were that travel time is too long, examinations need greater emphasis on practical considerations, too much memorization is required, the syllabus changes too frequently; stability is preferred. However, as summarized by one respondent: "Despite some criticism, I think the system is working well."

2. The future actuary. The primary debate regarding examinations concerns the actuarial skill sets required of future actuaries. Actuaries who can address traditional actuarial responsibilities are still in demand. Employers want actuaries who know how to develop rates, perform reserve analysis, and provide actuarial statements of opinion.

Based on current known demand, many actuaries think it is unnecessary to develop the skill sets required for investment management, customer relationship management, and enterprise risk management. These skills are simply not needed in today's actuarial environment. In addition, how does one build comprehensive examinations for an unspecified set of skills in roles with unknown demands? The thought is that actuarial organizations must focus their efforts on developing qualified actuaries to fill current positions now. The actuarial examinations and their content will evolve based on the actual demands and needs of future employers. In other words, the future will take care of itself.

We know that over the long term, the syllabus must change to avoid professional obsolescence. The issue is: How fast must the actuarial profession innovate? The profession needs an education system that can more rapidly respond to change and innovation. Once a paradigm shift in practice emerges, the basic education system must be able to quickly respond. For example, despite the recent additions of basic financial economics, in all our interviews with university faculty specializing in insurance issues, they consistently noted that the actuarial educational process is significantly behind in its inclusion of financial economics, which is critical to the implementation of "fair value" accounting for insurance company liabilities.

Much of the debate in the Morris Review regarding actuarial education centers on the balance between a static core knowledge base and actuarial innovation. Actuarial core knowledge was developed around regulatory risk metrics that 1) emphasize downside risks and 2) favor conservatism in actuarial solutions. Regulation created a static environment for the insurance industry and actuaries. Innovation occurs, but only over time. Unfortunately, such conservative approaches have also introduced a lack of transparency, maybe even lack of relevance, into actuarial work. This has become a

handicap for actuaries in today's financial markets and has created opportunities for others to lead efforts aimed at innovation.

3. Narrow vs. broad scope of services. Can the actuarial profession afford to remain narrow in its scope of services? Should it combine its current base knowledge in modeling downside risks with models of financial risks that also contain the upside to a transaction? The trend toward principles-based regulation of insurance requires integration among actuarial, economic, and financial theories, and frameworks and principles as they relate to the strategic direction of financial institutions.

Many current financial and economic concepts, such as modern financial theory, economic capital, value at risk, and derivatives, have significantly changed the financial markets. The insurance industry, which has been slow to follow, is now playing catch-up. To compete in this dynamic environment, actuarial examinations should place more emphasis on education, diversifying the actuarial knowledge base, and expanding training in basic modeling techniques. Consideration should also be given to offering specialized certificates for training in specific areas, such as derivatives.

4. Fellowship skill sets. What does the Fellowship designation really mean? What educational basis and skills should it indicate? According to multiple surveys and discussions with individual actuaries, no one wants a decline in the quality of the Fellowship designation.

Actuaries too often equate the difficulty of the actuarial examinations with the quality of the Fellowship designation. A long and arduous examination process exists, but it may be excessively concerned with actuarial self-image and inadequately concerned with the quality of actuarial work. Leadership of the actuarial profession must define the meaning of Fellowship at two levels: specialist vs. generalist, and basic skills vs. skilled expert.

a. Specialist vs. generalist

An educational process directed more toward training than education has led to tighter and tighter boundaries regarding acceptable approaches to core actuarial problems. As a result, differentiation between any two actuaries in their approaches to a problem may, at times, be minimal (leading from Actuarial Standards of Practice). However limiting in purpose and scope, the technical skills of the specialist have been invaluable to the historical growth and reputation of the profession. According to the CRUSAP survey, specialists tend to like the traditional system of exams, the more difficult the better.

While grounded in the core knowledge base, generalists' skills are often honed with experience, allowing them to differentiate among a broader set of potential business solutions at the expense of an in-depth technical response. Generalist responses in the survey tended to emphasize well-roundedness, flexibility, and the ability to think, rather than just manipulate formulas.

The mix of specialist and generalist within a professional organization determines the direction of the organization's examination process and content. If the demand

environment shifts from one skill set to the other, will the organization membership recognize it? For example, presume a scenario where the demand is assumed to be toward specialists but future demand is actually shifting toward generalists. Students entering the profession may have specialist skills by temperament, personality type, interest, etc. Specialists will dominate the leadership and see no reason to change, regardless of the new shift to generalist skill demands. As one respondent stated: "The profession, by its testing rigor, generally attracts people who are not very good communicators and are not good advocates. So unless the educational system can reward those who do not have the deeply technical knowledge of others, it will be difficult to change the profession."

The two primary actuarial examination bodies of the United States (the SOA and the CAS) have taken different approaches to this issue. The SOA's educational system incorporates and acknowledges a wider skill diversification in its track approach in the Fellowship examinations. The CAS, on the other hand, holds to a single-track approach — skill consolidation.

The actuarial organizations in the United States are in the initial stages of a dilemma. It is the primary issue in the education and training of future actuaries. If an actuary's main areas of specialization remain narrowly defined to pricing and reserving roles within the insurance and retirement industries, the current examination approach works extremely well. However, as discussed earlier, the environment in which actuaries operate is becoming more dynamic. It is increasingly important that actuaries be given the necessary skills to respond to new, emerging problems.

b. Basic skills vs. skilled expert

Does being an actuary mean an end of one's education (expert) or simply the beginning of a lifetime of learning (basic skills)? Said one survey participant: "One standard for an actuary. Anything else might look and smell like an actuary, but he/she would not be an actuary! In other words, no 'para-actuaries.'" However, another respondent countered: "We are too caught up in wanting to test for everything an actuary might do. The goal should be a strong core education with recognition of the professional expectations to learn more on your own."

Leadership of the actuarial organizations must address this issue and communicate the goals and directions of actuarial education to all stakeholders — current actuaries, students, regulators, employers, and the public. Each examining organization should clarify its education position regarding not only the skill level at Fellowship (expert vs. basic) but also the core knowledge based on today's vs. tomorrow's skills, academic vs. practical mix, and expected travel time.

c. Efficacy and efficiency of examination process

The current examination process assumes that successful individuals demonstrate the required level of knowledge, self-education ability, self-motivation, and high intelligence. It also assumes that all individuals respond the same way to the stimuli of an examination process. Successful exam takers sometimes share common personality characteristics,

which may limit diversification within the actuarial profession. In order to retain a constant flow of viable candidates, social and demographic changes might require other delivery systems to support a different generation of students. Quite simply, the old-fashioned examination process of using pencil and paper, including the newer ventures into computerized testing, no longer meets the requirements of actuarial syllabus content, nor the nature of the students sitting for the examination. For example, in testing for model simulation skills, examination constraints allow only the most superficial of questions. Other delivery mechanisms, such as seminars, as being designed by the CAS, must continue to be advanced to address technological advances and where new approaches to skill verification must be implemented.

There are a number of different delivery structures that can complement the educational process. These include examinations, web-based modules and/or presentations, seminars, academic papers or theses, and on-line universities. We note that both the SOA and the CAS have begun to move toward several of these delivery structures, and this Task Force agrees with this direction.

The attitude toward travel time depends on whether one believes Fellows need to be experts, or whether the profession needs candidates who are able to compete with other quantitative professions, such as mergers and acquisition specialists, financial engineers, chartered financial analysts, and enterprise risk management specialists.

5. Globalization of actuarial skills and accreditation of actuaries. Another of the current issues is global actuarial qualification and reciprocity. Can an actuary qualified in Australia practice in the United States? To meet this goal of mutual recognition, the profession needs a global definition of actuarial skills.

The International Actuarial Association (IAA) has been developing a global definition of actuarial skills. In addition, it has implemented educational guidelines that member organizations (in the United States, these organization include the Academy, ASPPA, CAS, CCA, SOA) were to have met by 2005 in order to be accredited. The two U.S. educational organizations have initiated content changes in their examination systems to meet these compliance standards.

The IAA accreditation process requires that an actuarial organization provide training (education) in 10 areas of study: financial mathematics, probability and mathematical statistics, economics, accounting, modeling, statistical methods, actuarial mathematics, investment and asset management, principles of actuarial management, and professionalism.

6. Value proposition of Fellowship. Too many actuaries seem to believe that the value of Fellowship centers on the singular achievement arising from success in the basic examinations. Others, however, are adamant that an actuary's intelligence and creativity generate the value. Still others realize that regulation, through statements of actuarial opinion, creates value for actuaries. Unfortunately, these definitions all derive from actuaries' self-analysis. How do employers, legislators, regulators, and the general public

value actuaries? A definitive statement from the actuarial leadership is needed to develop, promote, and define the value clients place on actuarial Fellowship. The clarity of this value statement will set the educational needs for future Fellows.

Conclusions

- Regulation of the financial industry (including the insurance industry) is quickly moving from being a rules-based to a principles-based environment.
- The static environment in which actuarial services were traditionally performed is becoming dynamic.
- The actuarial examination process as currently structured is a training process, not an educational process.
- Training is both efficient and effective for the transfer of a specific set of skills; it works best in a static environment with well-defined problem sets.
- Education is less efficient, but effective for the transfer of a diversified set of skills; it works best in a dynamic environment with fuzzy problem sets.
- While technical training remains primary, it is only a portion of the skills an actuary needs: business acumen, communication, and human relationship skills are major factors in a successful actuarial career.
- There is increased market competition from other professions that can and do provide certain actuarial services: CPAs, MBAs, PhDs, chartered financial analysts, financial engineers, and risk managers (GARP, PRMIA).
- There are substitutes for actuarial services arising from globalization, technical innovations, and management's attitude toward greater use of non-credentialed actuaries.
- Examination processes produce substantial homogeneity in actuarial membership; homogeneity can impede innovation.
- Actuarial core knowledge should be expanded to introduce new skills.

Boards of directors for examination organizations should:

1. Define the value proposition to the public of Fellowship in light of more dynamic markets with respect to:
    a. Expertise vs. experience
    b. Competition in professional services markets
    c. Travel time expectations
2. Define the purpose and scope of actuarial skills that include:
    a. Education vs. training
    b. Education content
    c. Consideration of IAA educational criteria
3. Expand education system to include a combination of delivery formats:
    a. Examinations
    b. Seminars
    c. Academic/papers/theses
    d. Web-based modules/presentations
    e. On-line education

4. Increase the use of professional education services:
    a. Increased use of and improvement to learning outcome statements
    b. Selection of appropriate delivery format based on content design

Continuing Professional Education

Actuaries sell knowledge, and as a result, most display a professional commitment to stay current, maintain a position as "thought leaders" in the industry of financial risk, and expand into new future roles.

The survey results also highlighted how actuaries assess the current state of professional education. In question 16 of the CRUSAP survey, only 39 percent of the respondents thought that continuing actuarial education was "good" (33 percent) or "excellent" (6 percent). Approximately 30 percent rated the process as "adequate," and 28 percent of the survey respondents thought the continuing education process only "fair" (21 percent) or even "poor" (7 percent). In general, the complaints against the current continuing education process were:

- Voluntary approach to professional development credits
- Minimal continuing education requirements
- Inadequate delivery vehicles
- Failure to emphasize new developments and ideas
- Too general

From the survey results, the difference in attitude between basic and professional education is significant. As one respondent stated: "The continuing education doesn't come close to the basic education…"

1. Professional development requirements. "Continuing education (CE) is what one makes of it," said one survey respondent. "Some skate by, simply attending meetings without intending to walk away with much new knowledge; others learn considerably by attending to learn, or leading such a meeting." While this comment may touch on professional ethics, most actuaries take professional development seriously and see it as an opportunity to increase their knowledge and skills. Actuaries believe that maintaining their professional competencies is critical for their individual and professional success.

Another survey respondent stated: "Change the focus from reviewing old topics and methods to a broader understanding of today's fast-moving changes." With an increased demand for professional development that arises from dynamic environments, the question arises as to the opportunity for and requirements of actuarial development after Fellowship.

a. Formal vs. informal professional development requirements

Many of the respondents think that more stringent, monitored professional development criteria must be established. This may include re-certification of actuaries for certain key actuarial services, i.e., specialists' statements of actuarial opinions. This group of

respondents believes that many do not rigorously maintain their skills or education. To ensure the reputation and status of the actuarial designation, a more formal professional development system must be designed.

Inadequate and informal professional development criteria lead to a lack of participation in professional development offerings. This, in turn, leads to inadequate funding for such offerings due to poor attendance and/or participation, lack of development of in-depth professional development opportunities, and deterioration of professional skills over time.

b. Verification

Survey results show that future actuarial professional educational requirements need to include two components: 1) an increase in the minimum number of hours, and 2) formal verification. This would place the actuarial professional development criteria more on a par with those of other professional groups such as accountants, physicians, and lawyers.

c. Right to use designation

The carrot and stick of such a formal verifiable system is the use of the professional designation. Non-compliance results in the forfeiture of the right to the designation. A typical comment on professional development was: "CE should be mandatory to retain the actuarial designation."

2. Updating of professional skills. The primary purpose of professional education is to update skills. This includes the cross-fertilization of financial methodologies, technologies, and theories. This also includes educational presentations from outside the actuarial profession.

The SOA, as one example, took a substantial lead in the development of professional education when it created interest sections. Section membership adds professional strength to actuaries practicing in areas of special interest: finance, risk management, etc. It provides educational opportunities at a grass-roots level, enhancing actuarial knowledge and skill development. While led by actuaries, several of these sections have begun to reach out to other professional association groups, thereby introducing greater diversity of ideas and practice into the section. Said one survey participant: "…exposure to other disciplines would help give actuaries a better perspective on how their work fits into the larger picture."

a. Maintenance and expansion of skill sets

In a dynamic environment, the development and maintenance of technical skills are critical. A survey respondent asks for "comprehensive 'how to' seminars for some of the more technical areas."

Beyond technical skills, professional education must fill in observed holes in the primary educational system. A typical survey respondent stated, "I'd add more non-actuarial course work to expand our areas of expertise and spur creative thought." As actuaries advance through their careers, other proficiencies must be introduced, including ethical

considerations, professional ASOPs and Precepts, management responsibilities, strategic directions, and leadership skills.

b. Research and development

Professional education is not simply one way. It also entails expansion of core knowledge by creating new ideas, theories, and techniques, through research and development. Greater emphasis must be placed on new topics, such as innovations in financial market concepts or operational risk management; leadership skills including change management; communication skills; practical business issues and in-depth topical research; and discussions in such areas as stochastic modeling, internal models, etc. This can be accomplished through academic research and thought leadership in change management, operational research, risk theory and frameworks, methodologies, techniques, markets, etc.

Education, in the broadest sense, is inherent in most actuarial organizations' activities. For example, a critical component of the research and development activities resides with many committees, task forces, and working groups. From these activities comes an expectation of practical and theoretical advancement, actuarial service enhancements, and thought leadership. The reports from these groups should receive broad distribution and discussion. Too often they are written, accepted, and buried.

***3. Professional development delivery*.** The SOA and CAS are only beginning to understand that not all actuaries learn in the same way. They need to fulfill members' professional education needs by providing more varied and innovative approaches. Many of the survey respondents like the traditional self-study, or even advocate additional examinations, but most respondents want more content combined with convenient, effective, and efficient delivery.

Survey results reveal a great desire for relevant, cutting-edge, advanced, hands-on, in-depth learning experiences offered through a series of low-cost, time-sensitive, and efficient channels.

The Academy, ASPPA, CAS, CCA, and SOA must all continue to assume an expanded role in the delivery of educational topics, including web-based platforms; academic sponsorship of papers, symposiums, and classes; "on-line university" education; as well as the traditional seminars and programs at annual meetings. With the ever-decreasing time allocations combined with increasing costs of travel, there is greater demand for distance-learning approaches.

4. Value proposition. To maintain and increase the value the public places on actuarial services, the intelligence, creativity, ethics, and professionalism of all actuaries must be evident throughout their careers. The number of credentialed actuaries continues to increase. Demands for actuarial skills continue to expand. With a growing membership, the profession must design a complete educational system sufficient to meet the growing demands of the post-examination professional. To accomplish these goals, adequate

budgets must be established for the implementation and monitoring of professional development among actuaries.

Conclusions

- Credentialed actuaries have significant educational needs that are not currently being met.
- Actuarial core knowledge is expanding; professional development is required to remain current.
- To assure actuarial competency in a dynamic environment, actuaries need to spend an adequate number of hours on professional development.
- Professional education processes must emphasize building new skills in meeting membership needs; these processes must be timely in content, effective in delivery, convenient, and efficient.
- Professional development will produce greater heterogeneity in skills with more diverse specialized skills among actuarial membership.
- Continuing professional education is both a technical training process and an educational process.
- Training must be detailed, timely, and transfer a specific skill set.
- Education must be time efficient and effective in knowledge dissemination.
- Competition from other professions will increase in areas where actuaries can and do provide services; competing professionals including CPAs, MBAs, PhDs, chartered financial analysts (CFAs), financial engineers (members of the International Association of Financial Engineers — IAFE), and risk managers (members of the Global Association of Risk Professionals — GARP — and the Public Risk Management Association — PRMIA).
- There are actuarial alternatives arising from globalization of actuarial services, technical innovations, and management's attitude toward greater use of non-credentialed actuaries.

Boards of directors for examination organizations should:

1. Define the value proposition of Fellowship in light of:
    a. Actuarial strengths and weaknesses
    b. Competition in the professional services market
2. Define the purpose and scope of professional development that include:
    a. Enhancing the value the public places on actuaries; this is the value proposition for actuarial services
    b. Minimum professional development credits
    c. Education, training, and technology content
3. Draw up budgets for professional development
    a. Increase in budget for development and implementation of a professional development agenda
    b. Develop joint professional training and educational activities among the actuarial organizations — minimum 50 hours annually

c. Develop joint professional training, and develop joint educational activities with universities and other professional associations (IAFE, GARP, PRMIA, CFA Institute)

4. Expand education system to include a combination of delivery formats:
    a. Seminars
    b. Special interest sections
    c. Examinations
    d. Academic/papers/theses
    e. Web-based modules/presentations
    f. On-line education
5. Increase the use of professional education services:
    a. Increased use of and improvements to learning outcome statements
    b. Selection of appropriate delivery format based on content design

III. Ethics and Professionalism

Introduction

The actuarial profession substantially self-regulates its members' ethical and practice standards in the development and delivery of work products and actuarial opinions. It is particularly important, therefore, to have appropriate benchmarks that are measurable by both the profession and the publics served. The actuarial profession has made constant and continuous efforts in this respect through the Code of Professional Conduct and, as provided therein, by the development of Qualification Standards and Actuarial Standards of Practice. These primary sources of direction serve the actuarial profession as measurements of its members' professionalism and are the foundation for discussion in this section of the report.

Analysis

Code of Professional Conduct

In 2000, a joint committee of the five U.S. actuarial organizations proposed a single Code for the organizations to replace the outdated versions previously adopted in one form or another by the separate organizations. The goal at the time was to create uniform rules of conduct by which the profession and its publics could measure actuaries' performance in carrying out their responsibilities. This goal was met when all of the organizations adopted the same Code to become effective January 1, 2001.

While the Code has 14 Precepts and 23 Annotations, many agree that Precept 1 provides the most powerful guide to appropriate conduct, with the other Precepts and Annotations providing more detailed guidance.

Precept 1 states: "An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession's responsibility to the public and to uphold the reputation of the actuarial profession."

The Code is the primary tool currently employed in measuring professional responsibility and serves as the criterion for helping the Actuarial Board for Counseling and Discipline identify infractions of appropriate conduct.

In assessing how well this document has achieved its intended purpose of holding actuaries to a high level of ethical and professional behavior, the CRUSAP Task Force examined survey results, personal interviews, and published literature. The following paragraphs summarize what we learned.

There is general acceptance of the Code as both a success story of cooperation among the five U.S. organizations and a provider of the intended tools and guidelines to which actuaries want to see their fellow professionals held.

There is a question in the minds of many who were surveyed and interviewed on how the Code is actually used in the discipline process and where the lines are drawn regarding specific incidents of Code violation. One shared concern relates to the application of the discipline process and the lack of public notification of explicit facts relating to violations.

As discussed elsewhere in this report, the disciplinary process has been kept relatively confidential, with the members of the profession first becoming aware when notification of expulsion or other public discipline of a member is published by one of the actuarial organizations. Final decision on the form of discipline to be administered is left to the disciplined actuary's membership organization. Each organization may arrive at a different opinion regarding the severity of the violation and, as a result, impose a different form of discipline or none.

The imposition of different degrees of discipline by two or more organizations for the same infraction of the Code implies differing values and conflicting views of what constitutes appropriate conduct. This creates another challenge to the profession's public image. Some interviewees and survey respondents believe that full public disclosure of the infractions would help to illustrate the differences between right and wrong practice and help educate actuaries about limitations of professional conduct.

Among the arguments made for full disclosure are that the Code and the ASOPs provide clear guidance about what constitutes appropriate practice. There were, however, a few comments to the contrary where respondents were concerned that divulging the details of discipline cases will serve to define boundaries of practice and encourage those who work to stretch these boundaries to the narrowest threshold of professional responsibility.

There is a long-standing concern in the profession that actuaries who are not members of any of the U.S.-based actuarial organizations fall outside the requirements of the Code and the ABCD's authority. This is true for a number of enrolled actuaries, as well as for some individuals conducting actuarial work, even though they may not be fully credentialed and eligible for membership in a U.S.-based actuarial organization.

Actuarial Standards of Practice

Like the Code, ASOPs have been developed by volunteers from the actuarial profession. They are accepted by all members of the actuarial organizations. The current body of standards was initiated in the fall of 1985 with the establishment of the Interim Actuarial Standards Board and continued by the Actuarial Standards Board, created on July 1, 1988.

The development process for an ASOP begins with a draft standard written by an operating committee of the ASB, a task force, or a subcommittee reporting to one of the

operating committees. Each area of actuarial practice has an ASB operating committee responsible for drafting and preparing actuarial standards of practice for consideration by the ASB.

The current ASB operating committees are the Casualty Committee, the Health Committee, the Life Committee, the Pension Committee, and the General Committee (for standards that apply to more than one practice area). The entire Actuarial Standards Board then reviews the draft standard, and, if the Board finds it acceptable, the draft is then exposed to the profession for comments.

Following the exposure period, the operating committee may revise the standard after a careful consideration of the comments received. The draft is then submitted to the entire ASB, which may either adopt the revised standard or subject it to a second exposure process.

These exposure drafts are also forwarded to selected non-actuarial audiences if the topic is of particular importance to these audiences. In some cases, a standard may go through three exposure processes before finally being adopted by the ASB. If the exposure process results in a lack of consensus, the draft standard may be dropped.

There are currently 42 ASOPs, many of which have been reformatted and revised to reflect changes in practice, clarifications, changes in regulations, and formatting revisions. The ASOPs have been designed to provide principles-based guidance on generally accepted practice.

The ASOPs complement Code precepts in providing guidance to actuaries in conducting specific tasks and in delineating their responsibility to various stakeholders for the results based on their actuarial practices and opinions.

Through the International Actuarial Association, there is a significant initiative dedicated to writing global standards that apply to cross-border practice. This effort may well influence the way current ASOPs are applied and interpreted.

There are a number of areas of commentary pertaining to how the ASOPs meet the needs of the profession and the public, and they are discussed below.

1. Generally accepted or best practice. There are many comments in the survey responses and interviews about the quality of practices defined by ASOPs and specifically the difference between “generally accepted practices” and “best practices.” Is the ASB qualified to define best practice? Can best practice be appropriately defined for a sufficiently broad series of factual situations to achieve consistent results? The mere concept of best practice implies the superiority of one approach over all others, placing into question any alternative approach. Also there may be a liability-related argument that the concept of best practice leaves all other levels of practice subject to legal risk. The concept of best practice should be considered in any standard of practice if it is clearly defined and broadly accepted.

Alternatively, as a basis of acceptable practice, the ASOPs allow the profession to redefine, change, and incorporate best practices over time as they become understood and implemented. Such an approach may be congruent with that described in one of the interviews: "The concept of best practice is best measured and rewarded by the market." It could be argued that as the public appreciates and rewards better practices, all practice will move to conform to what was previously best practice, and the appropriate ASOPs will be brought along to bring such practice into the realm of generally accepted.

The question remains whether the standards can serve both as consensus of practice and as a vehicle to raise the bar on the level of practice through the exposure draft process.

2. Moving the standards forward. As pointed out in one of the interviews, the actuarial profession is guided by many different sciences that provide the measurements and tools that we use to apply the principles of actuarial science. We apply actuarial principles to areas of law, accounting, finance, economics, and business administration. They're also used in other sciences such as physics, medicine, and chemistry. As these uses change and grow, the actuarial profession's generally accepted practices may not keep up. ASOPs take a minimum of 12 months from concept to final adoption. As the profession moves into new areas, or as traditional areas evolve, this time lag may cause the profession to lose relevance in the face of emerging techniques and a changing financial landscape.

The traditional argument has been that deviation from any ASOP is permitted if appropriate disclosure is made and the actuary is prepared to defend his or her reasoning. Such deviations may be necessary because the standard codifies generally accepted practice at the time it was adopted. By the time specific actuarial work is performed, the practice may already be changing as a result of leading-edge thinking, regulatory changes, or requirements imposed by others outside the profession, such as the Securities and Exchange Commission (SEC) or the Financial Accounting Standards Board (FASB). Congressional action can suddenly change a law, or court rulings can change its interpretation. The American Institute of Certified Public Accountants (AICPA) may alter accounting practices, or FASB may redefine financial reporting requirements. The actuarial profession lacks the tools or authority to respond rapidly to these changes, which can weaken the profession.

There are also instances where long-standing and generally accepted practices do not embrace concepts that are part of some of these other sciences. As a critically important and current example, there are a growing number of actuaries concerned about a disconnect between pension funding and liability measurements, the ASOPs that guide this practice, and the fundamental concepts of financial economics. This issue raises many concerns about the ability of the profession to move out in front of a dramatically different practice context. The question is whether we can achieve this, profession-wide, through an ASOP that represents, to some, a correction of current practice. This issue of ASOPs as a tool for change is one that needs to be explored because of its broader implications for actuarial work with clients.

There are those who feel deviation from a standard in order to raise the level of practice may cause difficulties for actuarial clients who may not want to have actuarial work that is unsupported by standards**.**

Is it the ASB's charge to monitor and address changes in generally accepted practice when there is a preponderance of evidence suggesting that practice has evolved? Or is the profession better served if the ASB is proactive in raising the bar beyond generally accepted practice, thus calling for a change in practice and imposing on the publics served an increasingly higher standard? The challenge is to determine when that threshold has been reached.

Viewed in the proper perspective, most ASOPs do not limit the actuary's ability to practice in new ways or with new insights. However, if the exceptions to the ASOP become the rule, then the standards become marginalized. If the ASOPs are the definitive works by which the public at large measures the profession's core responsibilities, then the ASB may need to identify circumstances when generally accepted practice is no longer appropriate and use the drafting process as a means to change practice.

3. Conflict of interest. Even ignoring, for a moment, the body of standards guiding the ethical and professional conduct of actuaries, the actuary faces the same potential conflicts of interest as anyone working in the business world. Whether an actuary consults for many businesses or for one, or works in academia, he or she serves more than one public. Whether actuaries' clients are the companies that pay their fees or employers who sign their paychecks, clients' goals and objectives may diverge from the findings produced by objective, fundamental actuarial analysis.

It is not difficult to envision situations in which even actuaries with high regard for the Code and ASOPs find themselves advocating for their clients. By succumbing to pressure to meet the client's needs instead of providing an objective work product, they could be judged to have compromised their objectivity.

It can be argued that, in certain respects, some of the ASOPs have helped support these impressions if "generally accepted" practice is a function of the specific work product that is subject to the influence of clients' needs. However, based on the CRUSAP surveys and interviews, it would appear that the profession has done a good job of balancing these pressures. Some argue a more prescriptive set of standards would support the profession by providing a set of rules for reporting. However, a greater number place substantial reliance on "actuarial judgment" in providing real value to the actuary's work product — as long as the actuary can maintain his or her objectivity and independence in the face of advocacy pressure.

It is unclear how actuaries can resolve conflicts with their clients. As long as a client can threaten to find another actuary to provide actuarial services, the implied leverage might well have an effect on the actuary's work product. And, because of its relatively small size, the actuarial profession lacks the financial resources to either implement independent procedures or support a paid professional standards board such as the FASB,

a suggestion posed by a number of survey respondents (who may not understand that FASB sets accounting standards for publicly traded corporations to use in their financial reporting and that the AICPA sets standards of practice for accountants).

4. Principles-based vs. rules-based standards. Many CRUSAP survey responses reflect a desire, articulated as well by respondents to the Academy's 2005 Professionalism Standards Summary Survey, for "greater practical guidance on matters involving professional ethics and judgment." CRUSAP survey respondents feel that the ASOPs should provide such practical guidance, while others want them to remain principles-based and allow for the application of greater actuarial judgment. There is a fundamental concern that rules-based standards remove judgment and put professionalism at risk in the process.

The objective of a rules-based standard is to remove the potential influence of clients from the actuarial work product. The issue of developing rules in applying actuarial processes that would take precedence over professional judgment threatens to marginalize the value of our work product. For many actuaries, it is the concept of actuarial judgment, reflecting years of practice and experience and an understanding of multiple financial and statistical trends, that represents the value added by actuaries over other risk analysis professionals.

Actuaries sell objectivity in the application of experienced judgment in such matters as assumptions and modeling of likely future events. Some actuaries are concerned that if objective judgment is exchanged for standards that set procedures over principles, their practice will be compromised, and the actuarial work product will become commoditized. The way the actuarial profession uses its judgment has influenced others to impose rules that, in effect, force our practice into a rules-based process through reporting standards and tax compliance laws. Does that mean objectivity and actuarial judgment are synonymous with the concept of actuarial professionalism? For our judgment to be valued, the public's trust in our ethics and professionalism must be high as well.

5. Public understanding of the profession. Why is the public's understanding of the actuarial work product important to a review of the profession's ethics and professionalism? When actuarial work is challenged by the public, the profession seems to be judged unfairly because of unrealistic expectations. There is little understanding of the fundamental uncertainty of actuarial work and objectives in the determination of a best estimate valuation process.

This is an emerging issue because the public tends to equate actuarial uncertainty with incompetence, which adversely affects our reputation when this assessment is disseminated through various media and the courts. The public perceives the actuarial work product as the correct value rather than the best estimate of a range of probable values. While actuarial work products are based on expectations of future financial outcomes, the public often mistakenly compares our results with financial results that reflect past performance and spot valuations.

Only those who understand the concept of actuarial assumptions and results based on probabilities accept actuarial findings in terms of best estimates and understand that future events can cause great variance and volatility in the same measurements over time. Hence, the profession's ethics and professionalism will be better appreciated by the public if the public has a better understanding of the nature of actuarial work.

6. Measuring professionalism. The Academy's 2005 Professionalism Standards Survey found that only 28 percent of responding actuaries had read the Qualification Standards. And this response was from the same fraction of the profession that answered the survey, which might imply a much lower percentage among all actuaries if we make an inference that those who answer professional surveys are more engaged in the issues of the profession than those who don't.

While there are high percentages of those in the CRUSAP survey who are familiar with the Code, Qualification Standards, and the Actuarial Standards of Practice, is that enough? Are the applications of the ASOPs a measure of our dedication to professionalism?

Some of our survey results raised the question of whether professionalism can be learned in the lecture hall or meeting room, or through the shock of seeing case studies that sound too much like one's own practices.

7. External viewpoints. There has been some discussion, particularly in the individual interviews, about the need for external input into actuarial standards. This seems to reflect the same general concerns about a profession that is essentially self-regulated. It may also be part of the debate suggested above in areas where we are expected to have some degree of expertise, such as in the area of financial economics, but not sufficient impetus to incorporate its responses into our ASOPs. In part, such input and direction might be effectuated through an oversight board. However, there is general concern that our practice is hard enough to understand by other professions and that our standards of practice should be defined by actuaries.

There may, however, be a valuable role to be played, in the eyes of both the profession and the public, by a formal advisory committee of related professionals to formalize a process that has been used on an ad hoc basis in the past by the ASB.

Conclusions

It is important for the profession that the Code be generally accepted and considered an effective statement of its values and criteria in the conduct of actuarial business. Likewise, the ASOPs represent to the profession the primary way to measure specific practice.

Through the Code, the ASOPs, practice notes, issue briefs, and related literature, the profession has been effective in maintaining high grades in the areas of ethics and professionalism among those who work with actuaries. As the public is increasingly exposed to what actuaries do, however, the relatively low degree of understanding of the

profession and its work product could jeopardize this success. The profession needs to develop strong new initiatives to broaden the public view of our work and enhance the ethical and professional standing of the actuary in the world of business and in society.

We conclude that the profession should look forward in the following areas:

- Exploring ways to support changes in actuarial practice. Actuarial professionalism is challenged both by the profession's ability to remain current with academic thinking and by its willingness to accept concepts and theories relevant to actuarial science and emerging practice that are developed outside the profession. This may call for change in the way ASOPs are developed.
- Providing more guidance on conflicts of interest that actuaries can present as the basis of countering agency pressures from their clients and in support of Precept 1 of the Code. Take this opportunity to explore ways in which actuaries can report on bad business practice without subjecting themselves to increased potential for litigation.
- Continuing efforts for public recognition of the uncertainty inherent in the nature of the actuarial work product and a greater understanding of the nature of risk.
- Accepting the nature and value of principles-based vs. practical standards and reconciliation between general vs. best practice.
- Increasing actuarial standing in the business community through efforts by individual actuaries, including moving out in front of other professions when defining appropriate measurements of contingent financial events. The actuarial profession could then be positioned to influence state and federal legislators, the FASB, the NAIC, or the Pension Benefit Guaranty Corporation.
- Engaging and partnering with other professions and agencies to improve understanding of what actuaries do in order to enhance appreciation of the high degree of actuarial professional practice and ethics, and to broaden acceptance of actuaries among those perceived as broad thinkers and skilled communicators.
- Addressing active participation of outside professions in the identification and development of ASOPs and continuing to seek outside commentary on the current body of ASOPs, including identifying a body of external subject-specific advisory panels from which comments are not just requested but supplied.
- Considering the creation of a formal advisory committee of related professionals to provide an independent view of ASOPs as they develop.

IV. Oversight and Regulation

Introduction

The effectiveness of a profession's disciplinary process can have a significant impact on its credibility and on its success at meeting the public's needs. Where oversight and discipline are effective, poor-quality work is more likely to be identified and addressed. Professionals are given an incentive to maintain and update their skills, reducing the likelihood of poor-quality work. On the other hand, where the oversight and disciplinary processes of a profession are lax, poor-quality work may go unnoticed for a long time. Given the long-term nature of the work actuaries do, this is a distinct danger. When ultimately discovered, the profession's credibility is damaged. Also, users aren't always qualified to judge the quality of actuarial work, which makes it particularly critical for the actuarial profession to have an effective system of oversight and regulation.

The system of oversight and regulation of actuaries in the United States consists of multiple elements:

- Direct government oversight in the case of enrolled actuaries;
- Indirect oversight by state insurance regulators, through their regulation of insurance companies, including review of insurance company reserves and rates;
- Oversight and discipline provided by a combination of the Actuarial Board for Counseling and Discipline and the five membership organizations.

Direct Government Oversight

Enrolled actuaries (EAs) are the only actuaries subject to direct governmental regulation in the United States. An EA is regulated by the Joint Board for the Enrollment of Actuaries (JBEA), which was established pursuant to Sec. 3041 of the Employee Retirement Income Security Act of 1974 (ERISA). The Joint Board is composed of five members, three appointed by the Secretary of the Treasury and two appointed by the Secretary of Labor. In addition, the Pension Benefit Guaranty Corporation has one representative with no voting power.

The Joint Board qualifies individuals to perform services under ERISA. It also conducts disciplinary proceedings. In general, there are three types of misconduct that may subject an enrolled actuary to disciplinary action. These are (1) misconduct during the performance of actuarial services under ERISA; (2) misconduct related to the enrolled actuary's federal tax return; and (3) other misconduct not related to the performance of actuarial services under ERISA.

As indicated, enrolled actuaries are the only actuaries currently subject to direct government oversight, via licensure. Interestingly, the American Academy of Actuaries was originally formed in 1965 to pursue a federal charter. Had that effort been successful,

it would have provided broader federal recognition of the actuarial profession, not unlike what Canadian actuaries currently have. It is possible that creation of an optional federal charter for insurance companies would create another opportunity for broader federal recognition of the profession, via either direct supervision or a system of indirect federal supervision (similar to what has evolved at the state level).

State Regulatory Oversight

State insurance regulators conduct regular financial examinations of insurance companies. The accreditation program of the National Association of Insurance Commissioners (NAIC) requires states to use actuaries in evaluating the adequacy of insurer reserves. In some lines of insurance (predominantly casualty and health), state insurance departments also review the rates and supporting loss data. These reviews provide some indirect oversight on the work of the company's actuary. Where that work is inadequate, the regulator may request that additional work be done.

In the case of life insurer reserve opinions, the NAIC's Model Actuarial Opinion and Memorandum Regulation (AOMR) allows the regulator to disqualify an actuary from filing future opinions under certain circumstances. The regulator must give proper notice, hold a hearing, and find that the actuary has, for example, demonstrated incompetence or untrustworthiness or submitted an opinion that was rejected for failing to meet the standards of the Actuarial Standards Board. The Actuarial Opinion instructions for property and casualty (P/C) companies, however, found in the Annual Statement Instructions, do not contain a similar provision.

Regulators typically report having seen instances of poor-quality actuarial work at times in their careers. Given the nature of regulation, which tends to deal with problem situations, regulators are among those most likely to observe substandard work. In most areas of actuarial work, however, regulators do not have the explicit authority to disqualify actuaries that is found in the AOMR. This would include, for example, property/casualty loss reserve opinion (mentioned earlier), certifying nonforfeiture benefits, and developing property/casualty or health rate filings.

Regulators also report some frustration with their ability to address poor-quality actuarial work. It appears that they rarely, if ever, use their regulatory authority to disqualify a life actuary from doing reserve opinions. In the case of property/casualty actuaries, they rely on the profession's self-disciplinary processes to disqualify an actuary. However, regulators are generally reluctant to submit complaints to the ABCD (discussed below) because it might have a potentially negative impact on pending litigation or on the regulatory process, or possibly because it might involve them in litigation.

Regulators view the oversight and regulation of actuaries as becoming increasingly important in light of the movement to a more principles-based valuation system in the life insurance industry. Given the increased use of judgment in reserving and capital requirements under a principles-based approach, the competence of the valuation actuary will become increasingly important. Several regulators have suggested that the profession's current self-regulatory processes do not give them sufficient confidence that poor-quality actuarial work will be identified and addressed. The NAIC and the

American Academy of Actuaries are considering a system of mandatory external review of specific actuarial work (e.g., reserving) as a possible solution.

Self-Regulation by the Profession

Oversight and discipline by the profession are currently the combined responsibility of the ABCD and the five membership organizations. Recognizing that the majority of actuaries (approximately 70 percent) belong to more than one membership organization, the five membership organizations created the ABCD in 1992 to reduce duplication in the investigation of a potential violation of the Code of Professional Conduct. The ABCD was created under the bylaws of the American Academy of Actuaries but is quasi-independent of the Academy. The Academy provides staff support, and the Academy board oversees the ABCD budget. The ABCD board is appointed by the presidents and presidents-elect of the five membership organizations.

The ABCD has authority to consider and investigate complaints or other information suggesting possible violations of the Code. While most cases come to the ABCD's attention by a complaint, the ABCD may also open a case on the basis of other information, such as news reports of litigation against an actuary or the imposition of federal discipline. (The ABCD has recently begun monitoring federal discipline against enrolled actuaries.) In addition to making recommendations for discipline, the ABCD may also counsel actuaries concerning their activities, respond to requests for guidance, or mediate to resolve issues.

The ABCD does not itself impose discipline. Rather, it makes recommendations for disciplinary action to the membership organizations. A fundamental principle of the current structure is that the authority to discipline members rests exclusively with the membership organizations. One complicating factor is that possible disciplinary actions vary across the different organizations. For example, some organizations permit private reprimands, while others (the Academy and the Society of Actuaries) do not. This has limited the ABCD's ability to use private reprimands and may have led to an increased use of counseling as a solution to possible Code violations.

The ABCD does not commonly recommend discipline, and most of the ABCD's cases are either dismissed or resolved with counseling. (See Table 4.1 below.) Excluding requests for guidance, between 1992 and 2005, the ABCD closed 279 cases, recommending public discipline in 13 and private reprimand in two. In part, this may be because of the inability to use private reprimands in some cases (see above). It also appears, however, that the ABCD generally views education as a preferable way to resolve poor performance in many situations.

Table 4.1
ABCD Cases Completed
Inception Through 2005

Outcome	# cases		Excluding Requests For Guidance
Dismissed	156	24.30%	55.91%

Dismissed w/ guidance	57	8.88%	20.43%
Counseled	40	6.23%	14.34%
Mediated	11	1.71%	3.94%
Recommended private reprimand	2	0.31%	0.72%
Recommended public discipline	13	2.02%	4.66%
	279	43.46%	100.00%
Replied to requests for guidance	363	56.54%	
	642	100.00%	

Some ABCD cases are not resolved for many years because they are in litigation. Where litigation is involved, the ABCD will generally agree to defer the investigation, provided the actuary files regular reports with the ABCD and agrees not to sign onto a settlement that limits the ABCD's ability to access the information it needs for its investigation.

Once a recommendation for discipline is made to the membership organization(s), those organizations follow their own internal processes. These may result in different outcomes. There has been at least one instance where the ABCD recommendation in a specific case was accepted by some organizations and rejected by others. The determination of whether to make the information public is left to the membership organizations, and the ABCD maintains confidentiality with respect to its investigations and deliberations. Comments from the CRUSAP survey and interviews suggested that many actuaries believe the membership organizations do not release sufficient detail on the nature of the actions that have resulted in discipline.

The ABCD has done extensive outreach and education in recent years, publishing case studies and other educational material. The ABCD has also received praise for its work responding to requests for guidance (see the report of the 2002 ABCD Review Task Force). Between 1992 and 2005, the ABCD responded to 363 requests for guidance. In some cases, where permitted by the requesting actuary, the ABCD has published redacted versions of the requests for guidance and its replies. This activity is helpful to the profession in understanding how the ABCD views the Code and the various Actuarial Standards of Practice.

An extensive review of the ABCD was undertaken in 2002. An ABCD Review Task Force was appointed by the Council of Presidents, a body composed of the presidents and presidents-elect of all the North American actuarial organizations. The ABCD Review Task Force, chaired by Daniel J. McCarthy, reported its recommendations in July 2002. The Task Force's overall conclusion was that the operation of the ABCD was fundamentally sound. It did identify some areas for improvement. Recommendations were made to improve timeliness, communications with affected parties, and the investigation process. The ABCD Review Task Force was particularly impressed with the ABCD's responses to requests for guidance and urged the ABCD to more widely publicize the availability of this service. The Task Force encouraged the ABCD to continue to educate the profession, using actual complaints and requests for guidance, appropriately redacted to preserve confidentiality. Finally, the Task Force commented that it was the "predominant view of the ABCD members" that it would be helpful if all

organizations had the private reprimand option available. Most of the ABCD Review Task Force's recommendations have been implemented. However, although the ABCD supported making the private reprimand option available in all organizations, this has not been done.

Analysis

Our review of the profession's systems for oversight and regulation identified several issues.

Learning About Possible Violations of the Code and Standards

Most of the ABCD's cases are initiated by complaints. Between 1992 and 2005, the ABCD closed a total of 279 cases (not including requests for guidance), or an average of 20 per year. This yearly total amounts to approximately 0.125 percent of the actuaries practicing in the United States. While it is impossible to judge the process strictly by statistics, there is a widespread perception that the ABCD is not receiving complaints on many situations involving Code violations. In the 2005 Professionalism Standards Survey, conducted in March 2005 by the Academy's Committee on Professional Responsibility, 29 percent of the respondents indicated they had been aware of an apparent breach of professional standards, but 96 percent of those individuals had not reported the matter to the ABCD.

State insurance regulators report in interviews, and anecdotally, that they are reluctant to file complaints with the ABCD for a variety of reasons, including the possibility of causing difficulties for future litigation in an insolvency or of further complicating the relationship with the regulated entity. According to the Joint Board for the Enrollment of Actuaries, there are many cases that never result in public discipline, but the Joint Board is not permitted to notify the ABCD about those cases. In the view of the ABCD, the most significant issue facing the profession with respect to the ABCD's role is that "regulators, actuaries, and others are not reporting many of the apparent violations of which they may be aware."

Precept 13 of the Code of Professional Conduct requires an actuary to report another actuary's apparent, unresolved material violation of the Code to the ABCD, except where the disclosure would be contrary to law or would divulge confidential information. An apparent violation is unresolved if the actuary observing the violation decides not to attempt to resolve it with the actuary or any attempt at resolving it is unsuccessful in the view of the observing actuary. Here again, there are limits to what is reported. Confidentiality protections in litigation may prevent an actuary from reporting a suspected Code violation. Furthermore, some actuaries report a reluctance to make complaints for a variety of reasons, including a lack of clarity on when a complaint is appropriate. Awareness about the ABCD also appears to be a problem, in spite of the ABCD's efforts at education and outreach. Based on the results of Academy professionalism surveys conducted in 2000 and 2005, it appears that the general level of awareness of the ABCD declined slightly between 2000 and 2005, as indicated in Table 4.2.

Table 4.2
Awareness of ABCD's Roles in 2000 and 2005

	2005	2000
Investigating complaints	93%	98%
Confidential counseling for actuaries	88%	88%
Recommending disciplinary actions	88%	94%
Offering confidential guidance	83%	79%
Serving as dispute mediator	61%	67%

American Academy of Actuaries professionalism surveys

To summarize, both regulators and actuaries report a reluctance to file (or legal impediments to filing) complaints with the ABCD. This raises concerns about a reliance on complaints to identify possible instances of misconduct. A self-regulatory process cannot be effective if it is unaware of problems in the profession. Given the long-term nature of the risks in the insurance industry and the inability of many users to assess the quality of work, it is particularly important that the profession be proactive in identifying violations of the Code. It will become increasingly important in a principles-based regulatory regime.

CRUSAP survey respondents and interviewees, as well as individuals concerned with professionalism issues, have suggested several approaches to expanding the utilization of the ABCD:

1. Increased outreach to actuaries and regulators. This could involve further education on the role of the ABCD, the process for filing a complaint, when to file a complaint, etc. Given the lack of understanding of the ABCD by many regulators, outreach to regulators may be particularly useful. However, outreach alone is unlikely to resolve the legal issues that prevent a complaint from being filed, such as confidentiality requirements in litigation.

2. Increased follow-up where discipline or counseling has been imposed. Currently, there is no follow-up when counseling is imposed; the actuary's work is not reviewed again unless another complaint is received. This may be appropriate for some complaints, such as those involving a particular billing conflict. In other cases, however, additional follow-up (e.g., periodic external review) would increase the ABCD's confidence that the counseling had had its desired effect. This could be the case, for example, where the counseling was imposed because of concerns about the quality of the actuary's work. There are implementation issues that need to be resolved, such as how the additional review is done, who does it, and how it is funded.

3. Triggers for automatic reviews of an actuary's work. Establishing a system of automatic reviews would reduce the reliance on complaints. Examples of such triggers include an insurer insolvency or a significant change in a property/casualty insurer's loss

reserves (recommended by the Casualty Actuarial Society's Task Force on Credibility of the Actuary in May 2005). One CRUSAP survey respondent suggested the profession create a committee of actuaries to assist the NAIC or states in determining if there was evidence of actuarial misconduct in an insolvency. However, current state confidentiality protections would limit the ability to do that effectively. The Academy's Council on Professionalism made such a proposal to the NAIC in 1994, but no action was taken.

While these options would reduce the reliance on complaints, they would also significantly increase the workload of the ABCD. This would be a challenge, particularly given that the board members serve as volunteers. Additional resources would need to be provided, and the triggers would need to be carefully and clearly defined to accomplish the objective with the available resources.

4. Statutory changes. As indicated, the ABCD's access to information is limited in some cases by state and federal law. The Joint Board for the Enrollment of Actuaries is unable to share information with the ABCD. Under most states' laws, information gathered during the course of a state regulator's examination of an insurance company is confidential. State legislation to allow state insurance regulators to share confidential information with the ABCD, and federal legislation to permit the Internal Revenue Service and the Joint Board for the Enrollment of Actuaries to provide information to the ABCD, would improve the ABCD's access to information.

This may be an opportune time to pursue changes to state legislation. The NAIC is currently revising the Property and Casualty Opinion Model law and developing a regulatory system for principles-based reserving in life insurance. In both cases, the role of the actuary in supporting state insurance regulation is clear, and the need for more effective communication between regulators and the profession's disciplinary process in cases of actuarial misconduct seems equally clear. Legislation should also enable the confidential sharing of private reprimand information with regulators.

5. Whistle-blower protections. Finally, some observers suggested the need for stronger whistle-blower protections. The CRUSAP Task Force did not do a state-by-state analysis of whistle-blower protections, and the need for stronger protections is not clear. Different states have different laws, and the need for change cannot be determined without significant study and legal assistance.

Credibility of the Process

The analysis identified some issues regarding the credibility of the profession's disciplinary processes once a case is opened. Some actuaries responding to the CRUSAP survey supported an aggressive approach to misconduct and questioned the ABCD's balance between counseling and recommendations for discipline, while others questioned the policy of delaying investigation during litigation. Some observers have questioned the consistency of ABCD decisions, arguing the ABCD used different interpretations of "conflict of interest" in different situations. Given the significant confidentiality protections that surround the activities of the ABCD, the ABCD is unable to respond adequately to these questions. Furthermore, the inability to release details about cases

hampers the ABCD's efforts to educate other actuaries using examples of actual misconduct.

The CRUSAP Task Force did not have access to confidential case information and is thus unable to provide its opinion on the balance between counseling and recommendations for discipline. It is difficult to make comparisons with other professions because of challenges in obtaining information, differences in the nature of the work, and differences in the membership. However, the number of cases resolved by the ABCD compares favorably with the number of cases resolved by the American Institute of Certified Public Accountants. (The ABCD closed an average of 20 cases per year between 1992 and 2005, excluding requests for guidance. This compares to a membership base of approximately 18,000. The AICPA closed 201 cases in 2004, out of 334,635 members.) Furthermore, both organizations dismissed roughly 25 percent of the cases without taking any action. A notable difference is that the AICPA is more likely to publicly discipline a member. Of the 201 cases resolved by the AICPA in 2004, 67 (or one-third) resulted in the member being expelled or suspended. By contrast, since 1992, only 11 of 279 disciplinary cases closed by the ABCD resulted in public discipline. The CRUSAP Task Force does not necessarily view these statistics as indicating a weak disciplinary process. The CRUSAP Task Force also generally supports a bias toward counseling and private reprimands as preferable to public discipline unless there is strong evidence to the contrary — an opinion that appears to be shared by the ABCD.

As described earlier, the final decision regarding discipline is made by the separate membership organizations. Each organization has its own process and own options for discipline. Two organizations do not have a private reprimand option available. The individual membership organizations can, and have, rejected the ABCD's recommendation in particular cases. Furthermore, when an actuary belongs to multiple organizations, the organizations may make different decisions regarding what discipline to impose. Given the existence of separate organizations and separate governance of each organization, this may be a reasonable outcome. However, it is likely to be confusing to those outside the profession and raises the potential for a loss of credibility where different organizations address a particular case of misconduct differently. Furthermore, given that the membership organizations make the decision on what information should be public, concern has been raised that they might issue inconsistent statements of the facts in cases involving public discipline.

The CRUSAP Task Force considered several issues related to the disciplinary process and its credibility.

1. Relationship to federal and state government. As described earlier, with the exception of enrolled actuaries, there is no system of direct governmental oversight of individual actuaries – a licensing system. State insurance regulators exercise a form of indirect oversight via their ability to disqualify an actuary from performing certain actuarial functions. However, this is currently limited to certain specific areas (e.g., life reserves). Given the significant role played by actuaries in the regulatory process, a stronger tie between regulators and the profession could be useful. One way to do this is to expand

the ability of regulators to disqualify actuaries from performing regulatory functions, including, for example, property/casualty loss reserving and rate filings.

It has also been suggested that a more fundamental change in the regulatory structure of the profession should be considered — specifically, that requiring actuaries to be licensed would enhance the credibility of the profession. While that is worth further discussion, the initial view of the Task Force is that licensing, in and of itself, does not increase the credibility of the profession. Rather, it is the competence of its members along with the quality of the work that plays the major role in determining credibility. Furthermore, there are challenges to creating a licensing system, particularly in the current state-based insurance regulatory system. Multi-state licensing is an inefficient and burdensome process, and the state regulatory system has not yet found a way to offer a single license accepted by all states. It is important, however, that the profession continue to play a significant role in the regulatory process. Consideration should be given to whether a federal licensing system would be desirable if Congress enacts optional federal charter legislation.

2. Transparency. The lack of transparency in the ABCD's operations, while problematic from the perspective of credibility, is also typical of an organization such as this. The Canadian Institute of Actuaries (CIA), which has a considerably more transparent disciplinary process than that of the United States, maintains confidentiality during the investigation phase and until a decision is made to pursue discipline. The same is true of the AICPA, AICPCU, Society of Chartered Property-Casualty Underwriters, and the Certified Financial Planner (CFP) Board of Standards. Indeed, confidentiality was the rule for every other organization we looked at. Similarly, many private organizations, including the AICPA and CFP Board of Standards, provide the option of private reprimand, in which case nothing about the case becomes public. However, once a decision is made to pursue public discipline, details about the case are generally public. In the case of the CIA, the hearings themselves are public. Given that most ABCD complaints are resolved without public discipline, it is unlikely that sufficient transparency can ever be provided to satisfy observers regarding the effectiveness of the profession's disciplinary processes. Nonetheless, this may be an area where the profession should consider obtaining outside assistance to benchmark its process against other disciplinary organizations, particularly as they relate to transparency.

3. Availability of private reprimand, uniform disciplinary decisions, and consistent public statements. The CRUSAP Task Force believes that all organizations should have a private reprimand option available. In the absence of a private reprimand option, the ABCD resolves more cases using counseling than it would otherwise. Other self-disciplinary systems reviewed by the CRUSAP Task Force had a private reprimand option.

Furthermore, the CRUSAP Task Force believes it is desirable for each of the actuarial organizations of which the actuary is a member to impose the same punishment in a particular case of misconduct. Developing a common menu of disciplinary options for the five membership organizations is unlikely to resolve the problem of non-uniform

discipline decisions so long as the decision is made individually by the separate organizations. The CRUSAP Task Force believes the profession should consider the creation of a new joint body (perhaps a joint standing committee) to impose discipline in lieu of the separate disciplinary processes within the membership organizations.

While the details of this process need to be developed, the CRUSAP Task Force discussed a structure in which the ABCD would do the initial investigation and decide whether to refer the case for discipline, without recommending a specific action. The ABCD would retain its role in counseling and would effectively become a body for investigation, counseling, and guidance. If, after an investigation and hearing, the ABCD decided to recommend discipline, it would provide the new disciplinary board or joint standing committee with copies of all relevant documents, including a copy of the ABCD's investigation report and a transcript of the hearing. The disciplinary board or joint standing committee would make a decision on what discipline to impose, if any, based on its established procedures. In this way, the process of investigation and discipline would be kept separate, a fundamental protection in most government disciplinary actions. Ideally, all of the membership organizations would defer to this body's decision. Similarly, the new board could be made responsible for public dissemination of appropriate information, eliminating the concern that the separate membership organizations would release inconsistent information in a disciplinary action. An appropriate appeals process would need to be created.

During its study, the CRUSAP Task Force reviewed the disciplinary processes of some other professional organizations. However, the Task Force did not conduct a detailed comparison between the disciplinary processes of the actuarial profession and those of other professions. There are experts knowledgeable in this area who could assist the actuarial profession in benchmarking its processes against others'. A knowledgeable expert could be retained to review the process, to consider where transparency might be improved (or confidentiality protections relaxed), and to assist with the establishment of the new disciplinary board or joint standing committee.

4. Involvement of non-actuaries in discipline decisions. The CRUSAP Task Force considered whether including non-actuaries in the disciplinary process might improve its credibility. Given the limited amount of public discipline, critics could argue that the current system is more illusion than real self-discipline, designed primarily to protect the profession. While the Task Force does not support that perspective, the current structure, coupled with confidentiality protections and the emphasis on counseling, makes it difficult to argue the profession's case persuasively. Some respondents believe the credibility of the U.S. process would be improved by including non-actuaries, and it would provide a healthy outside perspective on disciplinary actions. Others, however, are concerned about political interference from non-actuaries and the difficulty non-actuaries might have in understanding actuarial work. They have argued that nothing we can do will assuage the critics in the event of major actuarial malfeasance, i.e., self-discipline is ultimately doomed.

The CRUSAP Task Force believes the stronger arguments support the inclusion of non-

actuaries in the disciplinary process. Concerns about political interference and the ability to effectively contribute to the discussion can be addressed by selecting appropriate non-actuaries. One option for increasing the involvement of non-actuaries and enhancing the independence of the disciplinary process is to create a new Actuarial Oversight Board (AOB) with a significant membership of non-actuaries. The AOB would oversee the activities of the ABCD and the new joint disciplinary board. Ideally, the new joint disciplinary board would also include a number of non-actuaries.

Relationship Between ABCD, the ASB, and the Membership Organizations

The analysis uncovered two areas where the relationship between the ABCD and other structures in the profession should be changed or formalized.

1. Feedback to the actuarial standard-setting bodies and membership organizations. During its deliberations, the ABCD periodically identifies elements of the Code, Qualification Standards, or ASOPs that need to be clarified or amended. Currently, that feedback occurs on a very informal basis. The process for the ABCD to recommend changes to the Code, Qualification Standards, and ASOPs should be formalized, and its recommendations should periodically be made in writing.

In general, the ABCD is in a position to see problem issues that are developing within the profession. The ABCD should alert the membership organizations and standard-setting bodies when it sees a pattern of practice that is a concern to the Board. This would serve two purposes. First, it would help to clarify how the ABCD views emerging issues, and, second, it would focus the membership organizations and standard-setting bodies on issues that need to be addressed.

2. Relationship to the American Academy of Actuaries. Currently, the ABCD budget is part of the Academy's budget. This structure has led to at least one instance where the ABCD was negatively affected by trends in the Academy's financial condition. As the ABCD is, in reality, a joint body, its budget should be approved collectively by the five membership organizations.

Related to this is the need for increased transparency in the funding of the ABCD (and ASB). According to a May 2006 discussion paper prepared by the Independence Task Force of the Academy Council on Professionalism, the funding mechanism for the ABCD and ASB is not widely or well understood. Current perceptions are that the Academy funds the bulk of the ASB and ABCD budgets, creating the potential for the Academy to exert too much financial control over the boards' operations. The Independence Task Force has expressed its opinion that the amount paid by each member for the ABCD and ASB should be itemized separately on the organizations' dues notices to clarify their financial independence. The CRUSAP Task Force concurs.

Conclusions

The CRUSAP Task Force believes that the profession should consider taking the following actions:

A. Learning about possible violations of the Code and Standards

1. Continue outreach to actuaries and regulators, with increased emphasis on regulators.

2. Establish a procedure for follow-up where discipline or counseling has been imposed.

3. Consider developing a system of automatic triggers, such as an insurer solvency, for review of an actuary's work, including the resource issues and where the initial review should occur.

4. Explore the feasibility of the following legislative or regulatory changes:

    a. Ability for the Joint Board for the Enrollment of Actuaries and state insurance regulators to share confidential information with the ABCD;
    b. Ability for the ABCD to share confidential information with state and federal regulators;
    c. Stronger whistle-blower protections for actuaries and non-actuaries who report violations of actuarial standards, laws, or regulations by actuaries or non-actuaries.

B. Establishing credibility of the process

1. Consider the relationship between the profession and a federal insurance regulator, if Congress enacts federal charter legislation. In particular, consider whether it would be desirable to pursue federal recognition of the profession, perhaps through federal licensure.

2. Retain an expert on professional disciplinary processes to benchmark the profession's system against others', with particular emphasis on transparency.

3. Create a new disciplinary body (e.g., board or joint standing committee) that would make disciplinary decisions on behalf of all membership organizations and be responsible for public statements on disciplinary actions. Structure the process so a private reprimand is available to members of all organizations. Develop an appropriate appeals process for decisions made by the new disciplinary body.

4. Add non-actuaries to the disciplinary decision process. Consider creating an Actuarial Oversight Board (AOB) to oversee the operation of the ABCD and the new joint disciplinary body. Include non-actuaries on the AOB and the new joint disciplinary body.

C. Clarifying the relationship between the profession's self- regulatory bodies and the membership organizations

1. Formalize feedback from the ABCD to the ASB concerning recommended changes to the Code, Qualification Standards, and ASOPs.

2. Provide for joint approval of the ABCD, ASB, Actuarial Oversight Board, and the new disciplinary board budgets by the presidents and presidents-elect of the five membership organizations. Increase transparency in the per capita fees supporting these boards by itemizing charges separately in the dues notices of the participating organizations.

V. Actuarial Communications

Introduction

Communications, as it relates to the actuarial profession, is a multi-faceted topic and plays an integral role in each of the other topics covered by this review. Without proper and effective communications, the actuarial profession cannot adequately serve the actuarial needs of the public or live up to its full potential.

The topic covers communications between actuaries and the users of their services, as well as the general public. It embraces communications between the profession and the users of actuarial services, the general public, and the members of the profession. It includes the numerous forms of written, oral, and electronic presentations.

Each of the five U.S.-based actuarial organizations, as well as the various offspring of the U.S. actuarial profession, devotes significant resources in terms of staff, volunteers, and finances in preparing, distributing, and presenting communications. The primary thrust of the profession's communication efforts has been directed at its members and selected segments of the public served by the profession, most notably legislators, regulators, and other professions.

In general, communications with the direct users of actuarial services and work products have been left largely to the individual actuaries who provide their services. Although some efforts have been made in the past to direct communications to the general public, usually such efforts have not been very effective, and the actuarial profession remains either unknown or something of an enigma in the eyes of the public.

There are numerous projects and activities currently underway by the actuarial organizations to improve communications directed at the users of actuarial services as well as at the general public. It is beyond the scope of this review to comment on these efforts individually, but the number and breadth of these activities show that the U.S. actuarial profession recognizes that improved communications can help it serve the public's actuarial needs by promoting better recognition and understanding of the profession.

Based on a review of the results of the CRUSAP surveys of actuaries and non-actuaries, the major issues relating to actuarial communications were classified under four broad headings:

- Communications by actuaries to the users of their services;
- Understanding of actuaries, the actuarial profession, and actuarial work products by the users of actuarial services;
- Communication activities by the actuarial profession;
- Visibility of actuaries and the actuarial profession to the general public.

The CRUSAP Task Force explored these issues in separate interviews conducted with a number of current and former leaders of the actuarial profession and prominent non-actuaries who have significant exposure to actuaries and the actuarial profession. These interviews and the elaborations on the responses contained in the surveys provided additional insight into these issues and offered a significant base of comments, examples, and suggested approaches for dealing with these issues.

Analysis

Communications by Actuaries to the Users of Their Services

The survey results provided an interesting insight into the differences between the way actuaries and non-actuaries perceive actuaries' ability to communicate effectively with the users of their services. Although the questions were worded somewhat differently in the two surveys, 75 percent of the actuaries responding felt that the users of their services had a reasonable or better understanding of the nature of actuarial services, including the inherent uncertainty of actuarial conclusions, while only 55 percent of non-actuaries felt actuaries did an acceptable job of communicating the nature of actuarial work and its inherent limitations. A significant majority of those individuals interviewed, both actuaries and non-actuaries, felt the need to improve the communication skills of actuaries in order to better deal with the users of their services.

Effective communication of the nature of actuarial work, its inherent limitations, and the uncertainty associated with the result is difficult. Actuarial work is frequently quite complex, using highly specialized mathematical and statistical concepts, arrays of assumptions, manipulation of volumes of data, and sophisticated computer modeling. Some of these concepts are not easily explained in simple, understandable language, and there is a tendency for some actuaries to lapse into the use of actuarial jargon and technical terms (actuarialese) when communicating with laypersons.

By the very nature of the mathematical underpinnings of actuarial science, the profession tends to attract individuals that psychological testers classify as being "thing oriented" as opposed to "people oriented." This may, in part, contribute to some actuaries' having less highly developed oral communication skills. An excellent work product, poorly communicated, may well be perceived as a poor work product.

Admittedly, the users of actuarial services may not be the most receptive audience. A number of the respondents cited the limited mathematical skills among some users, making it difficult for them to understand such basic concepts as simple statistical measures, let alone loss development methodologies and stochastic processes. Another problem frequently noted was that some users are interested only in the answers and want to avoid getting bogged down in the details. However, these difficulties should serve to sharpen the focus on how the actuary's communication skills might be improved.

A natural adjunct to better actuarial communication skills is an understanding by the actuary of the business operations and needs of the users of actuarial services. The appropriateness of the actuary's work in meeting the needs of the users is significantly enhanced if the actuary is familiar with the differing needs of specific users.

If actuaries could increase their communication skills, the users of actuarial services would be better served and they would have more respect for actuaries and the actuarial profession. Numerous suggestions have been offered on how communication training might be undertaken, including:

- Requiring such training at the academic level as a prerequisite to credentialing;
- Adding such training to the syllabus of the examinations leading to credentialing;
- Making such training a part of an expanded pre-Fellowship and/or pre-Associateship training program (e.g., the Fellowship Admissions Course and the Associate Professionalism Course of the Society of Actuaries);
- Giving credit for such training as a part of a continuing education program or requiring a minimum of such credits periodically.

Understanding of Actuaries, the Actuarial Profession, and Actuarial Work Products by the Users of Actuarial Services

Both actuary and non-actuary survey respondents and interviewees generally agreed that many users of actuarial services don't adequately understand the inherent variability and uncertainty of actuarial opinions and projections. Such a lack of understanding was regarded as one of the most significant communication problems the actuarial profession currently faces. It has frequently resulted in unintended and unrealistic expectations on the part of users; if and when adverse results develop, users tend to be dissatisfied and distrust individual actuaries and the profession. Too frequently, point estimates are assumed to be gospel and ranges are taken to be ironclad boundaries. At the same time, it was felt that placing too much emphasis on the variability of actuarial results could undermine the perceived value of actuarial services in the eyes of the users.

Users of actuarial services often fail to appreciate the constraints placed on actuaries and their work products by professional standards, regulations, accounting requirements, and the potential for litigation. Regulators in particular frequently fail to appreciate fully the professionalism of actuaries.

Users also fail to comprehend the magnitude of data, assumptions, and the work that may go into producing a single value or range of values. There is too frequently the assumption that actuarial results derive from a "black box" at the push of a button, without any actuarial input or judgment.

Some users equate actuarial work, which deals with developing values that reflect the economic effect of future contingent events, with accounting work, which deals with the developing values based on currently existing amounts. They expect a degree of exactitude that is neither intended nor possible. Users need to understand that actuarial work products are different from accounting; they are financial assessments of future risks as opposed to expected gains or losses.

It was also noted that some actuaries fail to communicate adequately how their services and work products might be best utilized by their clients in evaluating alternatives,

monitoring operations, and making sound business decisions. In such cases, the value of the actuarial services fails to attain its full potential and neither the client nor the actuarial profession is well served.

Both actuaries and non-actuaries appear to agree that the actuarial profession would benefit from an increased effort on the part of the profession in educating the users of actuarial services about actuaries and their work products,

Communication Activities by the Actuarial Profession

The U.S. actuarial profession, through the five actuarial membership organizations, The Actuarial Foundation, the Actuarial Standards Board, the Actuarial Board for Counseling and Discipline, the local and regional actuarial clubs and forums, and other organizations, undertakes a vast array of communication activities directed at the groups' membership and/or various segments of the public.

In terms of printed communications, these organizations currently prepare and distribute numerous journals, magazines, yearbooks, newsletters, committee and task force reports, white papers, monographs, comment letters, discussion papers, professionalism standards, practice notes, study notes, other education materials, manuals, brochures, press releases, *amicus curiae* briefs, and other documents.

Oral communications are disseminated through presentations at regional and national meetings of the membership organizations and local and regional actuarial clubs and forums; seminars; testimony; hearings; television and radio interviews; meetings with regulators, legislators, and their staffs; and meetings with other professionals.

In addition, extensive use is made of postings on the many websites operated by these organizations, audiocasts, webcasts, telecasts, e-mails, tape recordings, CDs, DVDs, and other forms of electronic communication.

It is virtually impossible to catalogue all of these communication activities, let alone comment on them individually.

In general, the profession gets high marks for its communication efforts directed at the U.S. Congress, federal regulatory organizations, the National Association of Insurance Commissioners, and the accounting profession. However, there were a number of comments, observations, and suggestions that emerged from the survey, interview responses, and subsequent research that are worth noting.

- There is a significant duplication of effort and expense in the vast array of communications currently emanating from the various actuarial organizations.

- Some of the effectiveness of the profession's communication efforts is lost because users perceive the profession as unable to speak with a single voice.

- Actuaries typically receive more communications from the profession than they can effectively use.

- Many users of actuarial services, as well as the general public, are either not aware of, or fail to make effective use of, the full range of communications made available by the actuarial profession.

- While the actuarial organizations have developed numerous websites as effective communication vehicles, they are, for the most part, directed at their memberships and are not necessarily easy for non-actuaries to navigate. (Nor are they for some actuaries.) The available material is of little interest, of no benefit, or too technical for non-actuaries.

- The profession would benefit by initiating some new communication efforts aimed at addressing the perceived problems of certain classes of users of actuarial services.

The duplication of effort and expense and the failure to speak with a single voice are largely attributable to the current structure of the U.S. actuarial profession and are addressed more fully in Section VI.

It has been said that while actuaries are bright, they don't read. This bit of hyperbole does address a real issue. Because actuaries tend to work under extreme time pressures and have such a large volume of technical material and regulations to keep abreast of, they frequently don't have enough time to read many of the communications the profession directs to them. So it should come as no surprise that many actuaries and non-actuaries are unaware of many of the profession's current communication activities. In several instances, respondents suggested initiating communication efforts that were already being performed.

One area where it was felt that the profession might benefit from a targeted communication effort would be to better educate users of actuarial services, especially regulators, as to the actuarial professionalism standards (conduct, qualification, and practice) and the actuarial counseling and discipline system.

Another area of potential benefit would be in educating users of actuarial services in some of the more technical aspects and uses of actuarial work and how to make better use of actuaries by giving appropriate recognition and consideration to the actuarial communications and advice that are available to management for planning and decision-making purposes. One approach would be to develop easy-to-understand brochures on such topics as the uncertainty inherent in actuarial estimates and projections, a comparison of various pension funding methods, the responsibilities of the appointed actuary, and cash flow testing.
Another approach might be for the profession to offer instructional seminars for specific classes of users aimed at providing a better understanding of the actuarial work

performed in their area and how to use it. Such users might, for example, include insurance company directors and pension plan trustees.

Visibility of Actuaries and the Actuarial Profession With the General Public

The general public does not seem to know very much about the actuarial profession or appreciate what actuaries do or are capable of doing. While public understanding may be greater than it was in the past, it still remains at a level far below an understanding of the work of other professions such as law, accountancy, and medicine. It also lags behind that found in some other countries.

In part, this lack of recognition stems from the relatively small size of the U.S. actuarial profession, the highly specialized and technical nature of its work, and its fragmented structure. Further, unlike the case with other professions, members of the general public do not usually have reason to use the services of actuaries directly, as they might those of lawyers, accountants, or physicians.

Arguments have been presented on both sides of the issue as to whether the profession should take specific actions to increase its visibility with the general public. On the one hand, a number of respondents felt that because of the profession's size and limited resources, any communication efforts directed at educating segments of the public might be more profitably employed by targeting direct users of actuarial services. A frequently encountered reaction was that the general public doesn't know much about actuaries and "really doesn't care." A number of respondents felt that there was no advantage to be gained by increasing the profession's visibility with the general public since the public does not directly employ actuaries.

On the other hand, some felt that since the profession has a responsibility to the general public, increasing public awareness of the profession would better position it to respond to the public's needs. As the actuarial profession seeks to apply its skill sets in non-traditional areas, greater professional visibility might result in more prospective employers seeking out the services of actuaries to fill their risk management needs rather than turning to other experts with greater visibility, such as MBAs, accountants, and economists. A recent survey conducted by the Society of Actuaries in connection with a report on opportunities for the actuarial profession found that only 7 percent of Wall Street professionals knew why they would want to talk to an actuary. Also, some felt that a higher visibility among the general public might attract more qualified candidates to the profession.

The most frequently suggested approach to increasing the visibility of the profession, while at the same time serving a recognized need of the general public, was for the profession to prepare communications aimed at the general public and designed to explain the actuarial aspects of current national issues, such as Social Security, Medicare, and pension reform. Even though the profession has already undertaken several such efforts, which have been reported by the media, they apparently have gone relatively unnoticed by the public and members of the profession.

Alternatively, a number of respondents believed that a better way to increase the general public's awareness of the profession would be for individual actuaries to become versed in the actuarial aspects of the important national issues and to take every opportunity to address them at non-actuarial meetings, in letters to the editor, and in discussions with friends and associates.

Finally, several survey respondents felt that the profession would gain greater recognition and stature if it took public stands on certain issues, rather than just providing impartial analysis to decision-makers. In particular, such stands would be taken when proposed legislation was deemed, from an actuarial perspective, to be seriously flawed or not in the public interest. A number of the interviewees felt that, while this might be a good idea, they questioned the profession's ability to secure a consensus on the issue in a timely manner, if at all.

Conclusions

Based on a review of the comments, observations, and suggestions made by the survey responders and interviewees, the input and guidance received from the Advisory Panel, the available literature, and additional research, the CRUSAP Task Force feels that the following conclusions best summarize the most important actuarial communication issues:

1.The oral and written communication skills of actuaries, which are critical to users' proper understanding and utilization of the actuary's services and work products, are in definite need of improvement. If actuaries could improve these communication skills, there would be fewer misconceptions and misunderstandings, a greater appreciation of actuaries and actuarial services, and an improved atmosphere to allow the actuary to better serve the needs of the user and the public.

2. Direct and indirect users of actuarial services do not adequately understand the variability and uncertainty inherent in the opinions and projections of actuaries. The CRUSAP Task Force viewed this as one of the most serious problems facing the actuarial profession. This lack of understanding frequently leads to unwarranted expectations on the part of users of the actuarial work product, resulting in disappointments, criticism, and a feeling that actuaries and actuarial skills are not adequate to the tasks. In some instances, this lack of understanding may lead to unwarranted litigation. This is an area that needs to be addressed not only by the individual actuary but also by the profession. In addressing this area, the profession must be careful not to place so much emphasis on the uncertainty of actuarial work as to demean the value of actuarial services.

3. Many users of actuarial services do not adequately understand and appreciate the abilities of actuaries, their education and training, their professionalism, and the standards and discipline procedures to which they are subject. Communication efforts in these areas need to be directed to all users of actuarial services, but professionalism, standards, and discipline procedures should receive particular emphasis in communications addressed to regulators.

4. The communication activities of the profession, while significant in scope and activity, are not as well directed and effective as they might be. To a significant extent, this may be attributed to the large number of actuarial entities engaged in the process without any consistent, overall planning and coordination among them. As a result, many identifiable needs of users of actuarial services are not currently being met.

5. The actuarial profession continues to have extremely low visibility with the general public. The CRUSAP Task Force recognizes that the limitations imposed by its size, resources, and areas of greater priority prevent the actuarial profession from making a concerted effort to educate the general public about the profession and what actuaries are capable of. It does believe that any efforts expended in this area, especially if they can be tied to other communication activities, would benefit the profession. Such efforts would facilitate the profession's entrée into non-traditional areas, attract more qualified candidates to actuarial careers, and enable the profession to better serve the needs of the general public.

Recommendations

Based on a review of the foregoing and recognizing the practicality of implementation, the following detailed recommendations are suggested for the actuarial profession to consider. Some of the recommendations address elements of more than one of the conclusions, and some conclusions are addressed by more than one recommendation. The order of these recommendations is not intended to reflect their perceived importance by the Task Force.

1. The actuarial profession should require training and/or demonstrated proficiency in communication skills as part of the basic education of actuaries leading to their credentialing. Such training and demonstrated proficiency include both oral and written communication skills.

   While the implementation of such a requirement would need a good deal of investigation and planning, some additional comments and suggestions are offered:

   a. It would be desirable to require both basic and technical communication skills.

   b. The training in basic oral and written communication skills could be satisfied by requiring the successful completion of appropriate speech and composition courses at the academic level.

   c. Not all academic institutions offer training in technical communications, and those that do usually restrict their offerings to technical report writing.

- The requirement for technical writing skills might be satisfied by including the topic in the actuarial examination syllabus materials; proficiency would be tested by essay examination.

- Training in technical oral communication skills might be accomplished through required participation in activities such as Toastmasters clubs. Negotiations to this end are currently underway between the Society of Actuaries and Toastmasters International, with the intention of establishing chapters specifically for actuaries and others involved in financial services.

2. The profession should develop and encourage continuing education training in communication skills.

   a. The continuing education requirements of the Qualification Standards should allow credit for such continuing education activities. The continuing education requirements in the current Qualification Standards, and in the most recent exposure draft of the proposed revisions, do not allow for such credit.

   b. Ideally, the continuing education requirements should mandate some minimum number of hours, devoted to periodically maintaining and enhancing communication skills. Recent changes to the Canadian Institute of Actuaries' continuing education requirements have a minimum requirement in the areas of business management, communications, and professionalism.

3. The U.S. actuarial organizations should develop an effective structure for coordinating communication activities, monitoring the information needs of the public, and establishing priorities. Not only will this better utilize the profession's limited resources, but it will also be a step in the right direction of allowing the profession to speak, if not with a single voice, at least with fewer voices.

   Among the priorities to be addressed are:

   a. The education of all users of actuarial services on the inherent uncertainty of actuarial estimates and projections. Possible approaches include:

      - Developing brochures that explain this concept in consistent, understandable, layman's terms.

      - Preparing articles for *Contingencies* and the pension and insurance trade press that address this issue.

- Developing program presentations and providing speakers for meetings of interested user groups.

b. The education of specific classes of users of actuarial services, such as insurance company directors and pension committees, in order to provide a better understanding and appreciation of the actuarial work products and responsibilities as they apply to their areas.

c. The education of regulators, especially insurance commissioners, on the professionalism standards and disciplinary system to which actuaries are subject and how to deal with what they perceive as inappropriate work by an actuary.

4. The actuarial profession should investigate retaining a firm specializing in professional organization communications to perform a study of the current communication activities of the U.S. actuarial organizations and their offspring. The study would have the following objectives:

a. Identify the duplication in communications among the various organizations.

b. Examine the degree to which various audiences are making appropriate use of the communications directed at them.

c. Compare the actuarial profession's communication vehicles, methods, and effectiveness with those of other professions.

d. Develop a suggested plan for the implementation of an integrated communication program for the profession to identify, prioritize, and meet the needs of the profession, its membership, and its various publics.

- Create an appropriate understanding of actuarial work products, their uses, and their value among current and prospective users of actuarial services,

- Educate the users of actuarial services about the inherent uncertainty of actuarial work products in a way that avoids any negative connotation,

- Provide regulators with a better appreciation of the skill sets and professionalism that actuaries bring to bear, including the profession's standards and discipline procedures, and its procedures for dealing with suspected poor performance.
- Emphasize the image of the U.S. actuarial profession as an entity as opposed to the multiple organizations it encompasses.

5. The U.S. actuarial profession should investigate development of a nonpartisan

website devoted exclusively to the users of actuarial services, potential users of actuarial services, and the general public. The website should:

a. Be user-friendly, highly intuitive, and employ easily understood language.

b. Identify itself as being a development of the U.S. actuarial profession as an entity, without focusing on the multiplicity of individual organizations.

c. Provide information that might be of interest to the various segments of the actuaries' public. This includes:

- the education and training of actuaries;
- the structure of the actuarial profession;
- a description of actuarial credentials;
- areas of actuarial expertise;
- traditional and non-traditional applications of actuarial services;
- actuarial professionalism standards and the discipline process;
- a description of actuarial work products;
- an explanation of actuarial terminology;
- positive explanations of the uncertainty that attaches to actuarial estimates and opinions, including what point estimates and ranges are intended to convey;
- descriptions of responsibilities imposed on actuaries by laws and regulations; and
- explanations of national issues having actuarial aspects, such as Social Security, Medicare, and pension reform.

d. Provide a description of, and linkage to, the relevant areas on the websites established by the actuarial organizations and their offspring.

e. Be widely publicized.

VI. Structure of the Profession

Introduction

In attempting to evaluate whether changes are needed in the actuarial profession in order to better serve the public, it is necessary and appropriate to examine the organizational structure of the profession. Accordingly, a question regarding the appropriateness of the profession's organizational structure was included in both the surveys and the interviews conducted by the CRUSAP Task Force. To provide context for discussion of this issue, it is useful to review the history of the actuarial organizations in the United States and previous attempts, both successful and otherwise, to consolidate the profession.

The organizational structure of the actuarial profession has undergone significant changes during the history of the profession in the United States. The Actuarial Society of America (ASA) was founded in 1889. The American Institute of Actuaries (AIA) was formed in 1909. The Casualty Actuarial (and Statistical) Society (of America) was founded in 1914 and was renamed the Casualty Actuarial Society (CAS) in 1921. By 1916, with the formation of the Fraternal Actuarial Association (FAA), there were four organizations of actuaries in the United States. Since that time, the number of organizations has been reduced by one merger and one dissolution, even as new organizations have come into existence. Starting in 1924, the ASA and the AIA began having joint meetings. This culminated in the merger of the two organizations to create the Society of Actuaries (SOA) in 1949.

Within a year after the creation of the SOA, the Conference of Actuaries in Public Practice (now the Conference of Consulting Actuaries, CCA) was incorporated. In 1965, the American Academy of Actuaries was created. In 1966, the American Society of Pension Actuaries (ASPA) was established. (In November 2004, ASPA became ASPPA, the American Society of Pension Professionals and Actuaries.) Then, in 1980, the FAA, having accomplished its purpose of making fraternal societies actuarially sound, attempted to have its members absorbed into the SOA. This required approval by a vote of two-thirds of the Fellows of the SOA, but the proposal was defeated with only 47 percent in favor in the largest vote ever on an SOA issue. In 1980, the FAA was dissolved.

In 1974, the enactment of the Employee Retirement Income Security Act (ERISA) created for the first time a federal government accreditation designation for actuaries doing work in the area of employer-sponsored defined benefit programs — the enrolled actuary (EA). This legislation placed unprecedented new responsibilities on the EA. Notably, membership in the American Academy of Actuaries was not a requirement for an actuary to qualify as an EA. However, inclusion of EAs who wished to become members of the Academy was accomplished in a series of steps. A high proportion of EAs, but not all, became members of the Academy. Even today, there are more than 200 EAs who are not members of any of the U.S. actuarial organizations.

Several unsuccessful attempts have been made to streamline the actuarial profession. In 1975, the Council of Presidents, based on a report from its Joint Committee on Organizational Coordination, recommended that the six actuarial bodies in North America (including the Canadian Institute of Actuaries) be reduced to three: one international body and a separate national body for Canada and for the United States. By 1976, four separate proposals for restructuring the actuarial profession were published in *The Actuary*. In response to the widespread interest, the Society of Actuaries Board of Governors appointed a Board subcommittee called the Actuarial Restructuring Committee (ARC). After receiving the ARC's report, which endorsed yet a fifth restructuring proposal, the SOA Board appointed a steering committee to work with the other actuarial organizations to find a compromise. Each organization named a committee to study the proposal and react to it, but little changed in the structure of the profession.

In 1987, the Task Force on Strengthening the Actuarial Profession was organized by the Council of Presidents, as noted earlier, a body composed of the presidents and presidents-elect of all the North American actuarial organizations. This task force issued a comprehensive report in 1988. Although the initial report recommended merging ASPA and CCA, the final report did not recommend merging any actuarial organizations. There were four final recommendations. The report was forwarded to each of the organizations, and all four of the recommendations could be said to have been implemented. As a result of the task force report, a Working Agreement for the Actuarial Profession was established in 1990, the American Academy of Actuaries was reorganized to include practice councils, the Actuarial Board for Counseling and Discipline was established in 1992, and the Academy undertook a program to increase member awareness of public policy issues.

In 1995, another attempt was made to reorganize the profession. This attempt was spearheaded by the president of the CCA through the Council of Presidents. Although this effort was not successful in reducing the number of organizations, it did result in the CCA opening up its admission.

Organizational rivalries from long ago have historically added to the difficulties in consolidating the profession. For example, when the SOA was created in 1949, it was dominated by life insurance company actuaries, and it refused to recognize casualty actuaries. In addition, some actuarial clubs, dominated by life actuaries, refused for many years to accept casualty actuaries as members. In response, casualty actuaries formed their own clubs. An unintentional slight of the CAS occurred as recently as the late 1990s with the beginning of *The North American Actuarial Journal (NAAJ)* under the SOA. The CAS already had its own scientific publication, the *Proceedings*, so the CAS declined to participate in the production process of the new journal. Nevertheless, the *NAAJ* solicited articles from casualty actuaries.

Despite the historic differences, the CAS and the SOA have cooperated congenially on several fronts. The CAS and SOA have held joint meetings. The first joint meeting of the CAS and SOA took place in 1978. The two organizations have worked together on

examinations since 1963, have provided joint assistance to the NAIC Blanks Committee, which had been organized by the National Association of Insurance Commissioners to revise the financial reporting blanks of insurance companies, and both have participated in the Directory of Actuarial Memberships since 1992. More recently, the CAS and SOA are joint sponsors of the Risk Management Section and cosponsor the annual Enterprise Risk Management Symposium.

Analysis

With this history in mind, we can now discuss in detail the various arguments for and against making changes in the organizational structure of the actuarial profession in the United States. In the survey responses the CRUSAP Task Force has reviewed and in the interviews it has conducted, many arguments have been made both for and against consolidating the profession. The following discussion analyzes the comments that are among the most compelling and/or commonly occurring arguments for and against making changes in the structure of the actuarial profession in the United States.

Responses to the Survey Questionnaires

The CRUSAP Task Force analyzed more than 1,400 surveys (encompassing both a pilot and a final survey) to learn the opinions of actuaries and non-actuaries regarding the organizational structure of the actuarial profession. (All the following percentages reflect the responses to the final survey.) Among actuaries, 34 percent of the survey respondents felt that the current structure was appropriate and 54 percent felt it was inappropriate (11 percent did not respond to the question). Among non-actuaries, 30 percent felt that the current structure was appropriate and 40 percent felt it was inappropriate (30 percent did not respond to the question). If they felt the current structure was appropriate, why was it appropriate? If they felt it was inappropriate, how should it be changed? Typical responses to this follow-up question were as follows:

- Multiple organizations are needed to serve the diverse needs of the profession, and consolidation might result in specialized needs being lost in the shuffle. Respondents who answered along these lines expressed concerns with the needs of the diverse specialties and subspecialties of the actuarial professional and the ability of the various organizations to meet the needs of their specialty.

- There are four major disciplines — life, health, pensions, and casualty. Respondents who answered along these lines generally felt that the SOA and the CAS are sufficient to meet the needs of these four disciplines.

- The Academy should be eliminated (and, presumably, its functions transferred to the remaining organizations). Some respondents saw no need for a public policy arm of the profession, and others saw no need for an umbrella organization. The implication is that they feel other professional organizations to which they belong can adequately serve their needs at reduced cost.

- CCA and ASPPA should be eliminated (and, presumably, their functions transferred to the remaining organizations). Typical comments of these respondents were that ASPPA is not an actuarial organization and that CCA does not provide for the needs of a specialty within the profession.

- The Academy is the political arm, public face, and umbrella organization of the profession. Numerous respondents saw the value of those three Academy functions.

- The CAS and SOA should merge. Respondents who made this suggestion most probably felt that some synergy would arise from the merging of the two testing and credentialing organizations.

- The actuarial profession is too broad and diverse to be consolidated effectively. Typical reasons provided by these respondents were that there is currently some overlap of organizational functions but not sufficient overlap to justify reorganization. Many suggested that there are currently enough organizations to meet individual needs but not so many as to dilute their value.

- The profession is too small to support five organizations. Many of those who responded along these lines felt that having five organizations is confusing to both actuaries and the public. Having five organizations is inefficient, involves too much bureaucracy, and dilutes volunteer work. They typically suggested that five organizations overlap and compete, resulting in an inefficient use of limited resources. They also felt that having multiple organizations means having disparate voices for the public. Having too many credentials confuses the public and detracts from the profession's prestige. Numerous respondents commented that larger professions are able to get along with fewer organizations.

- It is more efficient to have one governing body with different sections. Often those who felt five organizations are too many argued that a single unified organization would maximize effectiveness, influence, and consistency.

Responses From the Interview Process

The answers to the interviews conducted by the CRUSAP Task Force were more nuanced and not subject to statistical analysis. However, it is fair to say that a significant majority of those interviewed felt that the current structure of the profession includes too many organizations. This feeling is most pronounced among those who have served in an actuarial leadership position in the past.

The most common and/or compelling arguments for consolidation of the profession include the following:

- The actuarial profession isn't large enough to support five different organizations. The number of organizations with overlapping areas of interest dilutes the pool of

volunteers for committee assignments, speakers at meetings, leaders of workshops or seminars, and other volunteer efforts.

- The current organizational structure inhibits effective discipline of members of the actuarial profession. Although the Actuarial Board for Counseling and Discipline is empowered to investigate cases and make recommendations, it does not have the power to impose discipline. Only the member's organization has the authority to carry out the recommendations of the ABCD.

- The current organizational structure results in excessive time and effort spent by both staff and officers on coordination with other organizations.

- The existence of multiple organizations represents a significant barrier to globalization of the profession.

- The actuarial profession is under assault and needs to strengthen itself. For example, large accounting firms acquired actuarial consulting firms or hired consulting actuaries at least partly so they can better control the role of actuaries in the audit process. In addition, economists feel they are better equipped to provide expertise in areas that have traditionally been considered actuarial.

- The CCA has served its purpose. When the organization first began, only 7 percent of the members of the SOA were consulting actuaries, and the SOA had a strong orientation toward life companies. Today, more than 35 percent of the members of the SOA are consulting actuaries and the SOA has changed its orientation to serve the consulting actuaries.

The most common and/or compelling arguments for maintaining the current structure of the profession include the following:

- The rise and continued existence of five separate actuarial organizations is a function of market forces. Additional organizations would not have come into existence and would not continue to exist if the existing organizations were meeting the needs of a significant number of actuaries.

- In other countries, and in the International Actuarial Association, casualty actuaries often feel outnumbered and neglected. Casualty actuaries constitute only between 10 percent and 15 percent of the profession. When they are in a larger organization, their interests don't receive the same attention as those of the more numerous life and pension actuaries. With 4,000 casualty actuaries, there are enough to justify their own separate organization. While there may be some economies of scale from combining, they wouldn't be large and they are more than outweighed by the advantages of multiple organizations.

- The existence of multiple organizations provides competition among the organizations, and that improves services and effort.

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- Even if there is some inefficiency in the current structure, the forces opposed to consolidation are too powerful and the profession would be wasting valuable time, resources, and effort if it were to attempt to consolidate.

- It would not be appropriate to consolidate the current organizational structure because, in the process, the focus on any of the purposes of the existing organizations would be lost or significantly diminished.

Summary of the Evidence From the Questionnaires and Interviews

Based on all the evidence compiled by the CRUSAP Task Force, including questionnaires and interviews, the majority of respondents feel that five organizations is more than necessary for the actuarial profession in the United States and results in inefficiencies. Even among those who feel that the current structure is appropriate, many feel it is inefficient. Among those who feel the profession should be consolidated, there is no consensus on how the consolidation should occur or the reasons why it should occur.

Conclusions

In evaluating the appropriate organizational structure for the actuarial profession in the United States, the CRUSAP Task Force first had to determine what functions the actuarial profession needs to perform in order to best meet the needs of the public. The CRUSAP Task Force believes that the basic functions of the professional actuarial organizations should encompass the following activities:

- Establishing appropriate standards of conduct and qualification standards for members of the actuarial profession;
- Establishing standards of actuarial practice for the various types of work actuaries perform;
- Identifying public actuarial needs;
- Administering discipline to members of the profession;
- Educating new actuaries entering the profession;
- Overseeing and providing continuing education of established actuaries regarding improvements in actuarial techniques, changing conditions, and changes in laws and regulations affecting the work of established actuaries;
- Providing opportunities for actuaries to get together to discuss matters of mutual interest;
- Representing the position of the actuarial profession to governments, international actuarial bodies, and other entities on matters of public interest in which the actuarial profession has expertise;
- Promoting and coordinating research into matters of interest to the actuarial profession;
- Training actuaries in conventional and new applications of actuarial science.

The current organizational structure of the actuarial profession in the United States does result in inefficiencies, but some steps have been taken by the profession to reduce the

level of inefficiency. The Working Agreement for the Actuarial Profession, signed in 1990 by the five U.S.-based actuarial organizations and periodically revised, has been an initiative in this direction. However, the review finds that the Working Agreement does not provide the means necessary to ensure efficient use of financial and human resources within the profession, and does not include any enforcement provisions.

Virtually all of the previous attempts to consolidate the organizational structure of the profession have come from the leadership level. This appears to be because the leaders of the profession are the most acutely aware of the inefficiencies involved in coordinating activities among the various actuarial organizations. The majority of leaders or former leaders of the actuarial profession who were interviewed by the CRUSAP Task Force decried the profession's current organizational structure, and observed that the leaders of the organizations spend as much time coordinating among themselves as they do in accomplishing their goals.

On the other hand, there has not been a grass-roots effort to consolidate the profession or revolt against the inefficiencies of multiple organizations. For the members, the only outward evidence of the inefficiency of overlapping organizations is the multiple dues they must pay to several different organizations. In many cases, it is the actuary's employer who pays the dues, so the individual actuary isn't concerned with the financial impact of paying dues to multiple organizations. Moreover, the multiple organizations give actuaries many opportunities to meet and discuss matters of common interest with their peers, to participate in meetings where they feel their particular interests will be met, and to be a member of an organization where they feel their interests will not be lost in the shuffle.

As of December 2005, there were nearly 40,000 memberships in the five U.S. actuarial organizations. Over 82 percent of these actuarial memberships were associated with actuaries who are members of more than one organization. The number of memberships associated with more than one organization is 98 percent for the CCA, 94 percent for the Academy, 80 percent for the CAS, 76 percent for the ASPPA, and 72 percent for the SOA. In addition, the figures show that the SOA, the CAS, and the Academy account for over 95 percent of all actuarial memberships.

These figures raise the question of whether the needs of actuaries could be met with fewer organizations. In addition, they raise the question of whether the CCA and the ASPPA should be given the same deference in determining policies for the profession as the CAS, the SOA, and the Academy, since their memberships account for less than 5 percent of the actuarial memberships and since many of their members are also members of the SOA, the CAS, or the Academy. To further complicate matters, the College of Pension Actuaries (COPA) was established within the past two years. No membership statistics are yet available on the extent of the overlap of this organization with other actuarial organizations.

In evaluating the extensive and conflicting evidence we have accumulated regarding the structure of the actuarial profession, we have not taken lightly the advice we have

received — from actuaries whose judgment we greatly respect — and who oppose restructuring the profession. These actuaries have advised us that the subject of consolidation of the profession is too politically controversial to be successful and that the profession should not be wasting its valuable time and energy on a project that will probably fail. We have taken this advice very seriously and believe it is wise and far-sighted. However, we feel it is the duty of the CRUSAP Task Force to recommend the actuarial profession review its structure and functioning and adopt changes in the structure if those changes are in the best interests of the public.

This decision is especially significant because the organizational structure of the profession results in a significant distraction to the profession's leadership at a time when it is facing unprecedented challenges in meeting its goal of best serving the public. In addition to being a distraction to the leadership, the current organizational structure is an impediment to an effective voice for the profession in the internationalization of actuarial practice and in maintaining effective discipline within the profession. Accordingly, we make the recommendation set forth in the Recommendations section of this report that the leadership of the actuarial profession should hold a convention in 2007 intended to review the structure and functioning of the profession.

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 helps 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 defend 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 far from 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.** Licensing or other government recognition of such people may be a means of establishing 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 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 10 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 on-line 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 may need attention, as discussed above, and continued 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 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, also 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?"**

The ethical responsibilities of actuaries require that they comply with laws and regulations, but not blindly. If the actuary believes that a particular law or regulation is contrary to the public interest, he or she has the obligation to refuse to comply (and suffer the consequences) or, arguably, to comply while simultaneously announcing the reasons for his or her belief. Support for this admittedly debatable contention may be found in the first precept of the Code of Professional Conduct.

It is important to the credibility of the actuarial profession that the standards and oversight 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 oversight.

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, including the majority who are far more comfortable with numbers than with words. Nonetheless, the challenge 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 be done into the causes of statistical and other uncertainty in actuarial work, and into the most effective means of conveying that uncertainty.

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.** 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 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 make recommendations for consideration by the profession. As these issues are considered over the months ahead and beyond, the profession is encouraged to keep firmly in mind both its purpose and its needs. The two are inextricably interwoven as they move together into the actuarial heartland, the future.

RECOMMENDATIONS

The key recommendation of this CRUSAP Report is that the U.S. actuarial organizations should hold a convention, in 2007, for the express purpose of reviewing the structure and functioning of the actuarial profession, and to address the other recommendations of the report. The convention, to be effective, should have no more than two dozen delegates. Each of the six actuarial organizations (see Appendix G) should have one senatorial delegate, plus one or more delegates based on the size of the organization. A necessary condition to be a delegate should be to agree that primary consideration will be given to the actuarial needs of the public, secondary, to the needs of the actuarial profession as a whole, and, tertiary, to the needs of existing organizations. The charge to the convention should be to consider and act upon the issues addressed in this report, with particular attention to the dozen recommendations below (presented in no priority order):

1. Adopt "meeting the actuarial needs of the public" as the motto of the actuarial profession. A motto is "a short expression of a guiding principle," which in this case is also the purpose of the profession. Incorporate this principle into actuarial education, actuarial standards, and the actuarial work product. Recognize that the term "public" includes all direct and indirect users of actuarial services, including people who may be unaware of services provided on their behalf. This includes the person retaining the actuary, shareholders, policyholders, regulators, injured workers, and plan beneficiaries. It may also include taxpayers and future generations covered under social insurance. Recognize that meeting the needs of the public does not imply a legal duty to the public. Recognize, as well, that in order for actuarial needs to be met, the profession must be attractive to current and prospective actuaries.

2. Define and defend the field of actuarial science as "the quantification, analysis, and management of future contingent risk and its financial consequences." Promote actuarial work as a science, which requires telling the truth while at the same time recognizing and accepting inherent uncertainty and the role of judgment. Fully occupy the field of actuarial science as defined, going well beyond traditional actuarial services for insurance and benefit programs. Promote enterprise risk analysis as an

example of quintessential actuarial work, and the core of enterprise risk management. Charge the actuarial organizations with promoting the foregoing by means of basic and continuing education and government and public relations efforts.

3. Define and defend the value proposition for Fellowship by the board of directors of each educational organization. Given the public needs, identify characteristics, skills, and core knowledge that Fellowship should reflect. The value proposition of Fellowship should then lead to specific design of the educational system. Corresponding value propositions for other levels of membership in the actuarial profession should also be reflected in the design of the educational system.

4. Increase the use of alternative delivery systems to educate and examine prospective actuaries. Build on programs currently underway by the actuarial organizations. Provide for basic actuarial education by means of university-based actuarial science programs, and, as well, by Internet-based studies. Provide examination credit for independent research leading to a juried and published paper. Include communication skills and ethics training within the education system and as a part of the examination process. Retain substantial actuarial control over actuarial education and examination, perhaps by means of an accreditation process for universities and examination approval by a committee of actuaries established for the purpose.

5. Require active members of the actuarial profession to meet consistent continuing education requirements. Make continued active membership in all participating organizations contingent upon meeting triennial education requirements. Encourage the use of alternative delivery systems for this purpose. Require a significant amount of continuing education, such as 50 hours annually, but liberally allow a wide range of activities, such as independent research done in the course of a client assignment, to qualify as continuing education. Require minimum triennial study of the Code of Professional Conduct, and thereby of the profession’s ethical standards, qualification standards, and standards of practice.

35226. Investigate development of a website specifically directed at the users of actuarial services and the general public. The website should be structured as a user-friendly information resource by and about the actuarial profession. Its hallmark should be the provision of information about actuaries, actuarial work products, and the actuarial profession that might be of interest or benefit to the various publics, including direct users of actuarial services. The information should be presented in simple, easy-to-understand language. To be effective, the website should be widely publicized.

35307. Investigate retaining a firm specializing in professional organization communications to perform a study of the current communication activities of the U.S.-based actuarial organizations. Build on existing programs already underway by the actuarial organizations. The purpose of the study should be to review the efficacy of individual and combined communication efforts and to compare the actuarial profession's communication vehicles, methods, and effectiveness with those of other professions. As a part of the study, the firm should develop a suggested plan for the implementation of an integrated communication program for the profession to identify, prioritize, and meet the needs of its membership and its various publics. Specific among these needs for the users of actuarial services would be the creation of an appropriate understanding of actuarial work products, the value of those work products, and the uncertainty that attaches to them. The goal should also be to achieve an appreciation of actuarial skills and professionalism, including the profession's standards and discipline procedures. The plan should also focus on how best to develop and convey the images of the U.S. actuarial profession, again building on existing programs.

35468. In order to meet all the anticipated needs of the public, make a home somewhere within the actuarial profession for persons doing competent actuarial work who are not currently members of the U.S. actuarial organizations. Define "actuarial work" to be "the quantification, analysis, and management of future costs of contingent risk and its financial consequences." Designate one membership level for people who meet basic educational requirements promulgated or endorsed by the respective actuarial bodies. Retain the Fellowship designation for those who complete advanced specialty

studies and pass associated examinations promulgated by the learned actuarial bodies. Admit others to the profession upon proof that they are capable of doing competent actuarial work, as defined, and willing to abide by the standards of the profession.

9. Explore the feasibility of enacting legislation to protect whistle-blowers, including regulators, and to permit sharing of discipline information, with safeguards. Include protections for reporting violations by actuaries as well as by clients, employers, or others. Protections should cover reporting violations of actuarial standards, as well as violations of laws or regulations.

10. Encourage individual actuaries to gain sufficient knowledge to speak out on major actuarial issues. One such issue is the long-term financing of the national social insurance programs. Others include pension and tort reform, enterprise risk management of corporate risk, and cost/benefit analysis of legislative proposals. Diversity of opinion need not be discouraged so long as the opining actuary complies with actuarial standards and science. Groups of actuaries should be free to express their collective opinions, subject to the stated requirement, but the actuarial organizations should continue to restrict themselves to unbiased objective statements.

11. Establish professional regulation of actuaries that is substantially independent of the national actuarial organizations. Create a new board for the disciplining of actuaries, charged with making disciplinary decisions on behalf of all of the actuarial organizations. Consider the issue of transparency in public disciplinary actions. Continue the counseling and guidance roles of one of the existing professional regulation bodies, and the responsibilities of the other to promulgate actuarial standards of practice and to periodically review the Code of Professional Conduct. The professional regulation bodies should confer regularly to discuss matters of common interest, such as the relationship between actuarial standards and the need for counseling or other measures.

12. Provide for participation in the standards and discipline process by professionals who are not actuaries. The actuarial profession should consider appointing an actuarial oversight board consisting of a significant proportion of non-actuaries. Its responsibility is to manage the professional regulation boards that it oversees. The setting of practice standards and other functions requiring actuarial knowledge should be done exclusively by actuaries.

APPENDICES

APPENDIX A

CRUSAP HISTORY

The Critical Review of the U.S. Actuarial Profession (CRUSAP) was initiated in May 2005 by the Presidential Advisory Committee of the American Academy of Actuaries (Academy), at that time consisting of Barbara Lautzenheiser, Peter Perkins, and Bob Wilcox, with help from Kevin Cronin, Academy executive director. The initiative has been supported and funded by the Academy Board of Directors, which includes among others the president and president-elect of the American Society of Pension Professionals and Actuaries (ASPPA), the Casualty Actuarial Society (CAS), the Conference of Consulting Actuaries (CCA), and the Society of Actuaries (SOA), as well as the Academy.

The basic goal of CRUSAP was defined as: *Identify the actuarial needs of the public, determine whether they are being met, and, if not, propose action to meet those needs.* Fred Kilbourne was named as chairperson of the CRUSAP Task Force — the body that would design and conduct the critical review and develop recommendations to the profession based on its analysis of the project's findings.

During the summer of 2005, members of the CRUSAP Task Force were selected, representing diverse actuarial specializations and with distinguished careers in both the public and private sectors. Bob Collett, Guy King, Jim Rech, and Terri Vaughan were named to the Task Force, joining chairperson Fred Kilbourne. To provide additional advice and counsel to the work of CRUSAP, the Task Force decided to establish a formal Advisory Panel. Selection of the CRUSAP Advisory Panel was a highly deliberative process, taking place over the summer and early fall of 2005. Thirty highly regarded men and women were selected as Advisory Panel members — two-thirds of the group from the actuarial profession and one-third of the members non-actuaries, whose professional backgrounds encompass banking, academic life, management of pensions funds and health care organizations, government relations, and law. During this period, the Task Force also selected Dr. Mindy Reiser to serve as CRUSAP project manager.

In January 2006, Ken Kent and Jack Turnquist, originally members of the CRUSAP Advisory Panel, joined the Task Force, increasing its membership from five to seven actuaries. Kent and Turnquist were replaced on the Advisory Panel by two non-actuaries, bringing the composition of the 30-memberAdvisory Panel to 60 percent actuaries and 40 percent non-actuaries.

The CRUSAP Task Force began the data collection phase of its work with a search of actuarial and related literature relevant to the scope of the project. Task Force members drafted two important data collection instruments — one questionnaire for actuaries and a second questionnaire for non-actuaries. With the support of the staff of the American Academy of Actuaries, the Task Force developed web-based versions of the two

prototype questionnaires and undertook a pilot test of the two instruments. Questionnaire respondents provided valuable feedback to the Task Force on various facets of the questionnaires, and Task Force members — with the assistance of the project manager and the Academy's executive director — revised the questionnaire in response to the constructive suggestions they received. The final versions of the questionnaires were completed in mid-October and placed on the newly launched CRUSAP website — www.crusap.net — designed and developed by the Academy's Communications Department. Since its inception, the CRUSAP website has provided extensive information about the project and directly linked to the two CRUSAP questionnaires. The site contains detailed information on the background of CRUSAP, brief biographical materials on members of the CRUSAP Task Force and Advisory Panel, and links to relevant literature and actuarial organizations.

In all, more than 1,400 individuals responded to the pilot and final versions of the CRUSAP web-based questionnaires for actuaries and non-actuaries. The survey, with its "open" and "closed-ended" questions, has provided the Task Force with a rich source of data on the views of actuaries from a wide range of backgrounds and experience, as well as the observations of a limited number of knowledgeable individuals from outside the actuarial profession.

In the fall of 2005, The Task Force initiated the third component of its data collection effort — conducting telephone or in-person interviews with selected questionnaire respondents with the purpose of exploring in greater depth their survey observations and recommendations. Task Force members individually interviewed nearly all Advisory Panel members. Over the following months, the Task Force, through phone and in-person interviews, explored the views of a diverse group of actuaries and non-actuaries with broad experience with the profession. By mid-September 2006, nearly 70 interviews have been conducted.

The CRUSAP Advisory Panel has been actively involved in the Task Force's work throughout the life of the project. In November 2005, during the course of three conference calls, each with about one-third of its collective membership, the Advisory Panel discussed future CRUSAP work plans with the Task Force and considered important areas of project focus. A listserv was developed specifically for communications both among the Advisory Panel members and between the Advisory Panel and the Task Force. At the end of March 2006, the Advisory Panel was asked to review the overviews developed by Task Force members for each of the six CRUSAP report sections for which they had primary responsibility. In May, Advisory Panel members had the opportunity for dialogue with the authors of each of the six CRUSAP report sections through six separate conference calls focusing on the individual sections. At the end of June, Advisory Panel members, in person and by phone, participated in a lunchtime discussion with Task Force members on the CRUSAP report sections. In August, Advisory Panel members reviewed the CRUSAP Preliminary Draft Report, providing a rich array of observations and suggestions.

Outreach by the CRUSAP Task Force to the U.S. actuarial community began in July 2005 with an article describing the initiative in the American Academy of Actuaries' monthly newsletter *Actuarial Update.* It continued throughout the summer and fall with articles focusing on CRUSAP in the Academy's monthly electronic newsletter, *Inside the Academy;* in the Academy's bi-monthly magazine, *Contingencies;* and in additional articles in the *Actuarial Update*. In the fall of 2005, CRUSAP outreach efforts intensified with presentations on CRUSAP by members of the Task Force and Advisory Panel and with the distribution of information about the initiative at the fall meetings and related sessions of the Academy, ASPPA, CAS, CCA, and SOA. Outreach to other groups of actuaries also took place in the fall with a presentation by the Task Force chairman at a CAS professionalism course in California and a discussion led by the CRUSAP project manager at the Cincinnati Actuarial Club. Contact with the regulatory community was enhanced in December 2005 through the efforts of Advisory Panel member Al Gross, who called the attention of his fellow state insurance commissioners to the CRUSAP surveys.

During the winter months, the Academy, ASPPA, CAS, CCA, and SOA continued to draw the attention of their members to the CRUSAP web-based survey through announcements on their websites, through publications and conferences, and through blast e-mails. On March 8, 2006, Task Force Chairman Fred Kilbourne presented a CRUSAP overview as part of a CCA webcast on the *Morris Review of the Actuarial Profession*. In addition, Project Manager Mindy Reiser conducted a focus group with 13 actuarial science students at Drake University in Des Moines, Iowa, and held a dialogue with members of the Michigan Actuarial Society at the University of Michigan. Task Force members made presentations on CRUSAP at Academy, CAS, and CCA meetings, as well as at a North American Actuarial Council (NAAC) meeting. CRUSAP was the subject of presentations by Task Force members at the International Congress of Actuaries and International Actuarial Association meetings in Paris in late May and early June 2006.

On August 24, 2006, the CRUSAP Task Force discussed the CRUSAP Preliminary Draft Report with the presidents and presidents-elect of the U.S.-based NAAC member organizations. Written comments from these five actuarial organizations, the ASB, and the chairman of the ABCD, as well as the CRUSAP Advisory Panel, were received; the draft report reflects careful consideration of the suggestions made. The report has been placed on the CRUSAP website, and the Task Force is welcoming responses to the report until October 31, 2006.

The CRUSAP Draft Report and its recommendations will be discussed at greater length at the September meeting of the NAAC. CRUSAP will be the subject of presentations and discussions this fall at the annual meetings of the U.S.-based actuarial organizations. The Task Force anticipates additional opportunities over the coming months to address additional actuarial bodies, as well as local and regional actuarial clubs. The CRUSAP Final Report, incorporating ideas and suggestions made during the period of public comment, will be issued in mid-December 2006.

APPENDIX B

CRUSAP TASK FORCE

Fred Kilbourne, Chairman
Kilbourne, an independent consulting actuary in San Diego, is a member of five U.S. actuarial organizations, plus the Canadian Institute of Actuaries. He is president of the Conference of Consulting Actuaries, a member of the American Academy of Actuaries Board of Directors, a former president of the Casualty Actuarial Society, and a former vice chairperson of the Actuarial Standards Board (ASB).

Bob Collett
Collet, retired and living in Seattle, is former CEO of Milliman Inc. and chairman emeritus of Milliman Global. He is a former chair of the Society of Actuaries International Section and a former chair and current member of the International Actuarial Association Advice & Assistance Committee.

Ken Kent
Kent is a consulting actuary with Cheiron in McLean, Va. He is chairman of the Joint Committee of the Code of Professional Conduct, former president of the Conference of Consulting Actuaries, vice chairperson of the American Academy of Actuaries Council on Professionalism, and former vice president for pension issues of the American Academy of Actuaries.

Roland "Guy" King
King, president of King Associates, is a consulting actuary in Annapolis, Md. He is former chief actuary for Medicare and Medicaid, former vice chairperson of ASB, former vice chairperson of the American Academy of Actuaries Health Practice Council, and a recipient of the American Academy of Actuaries Robert J. Myers Public Service Award.

Jim Rech
Rech is vice president of GPW and Associates in Phoenix. He is chairperson of the American Academy of Actuaries Enterprise Risk Management Task Force and vice chairperson of the Academy's Risk Management and Solvency Committee.

Jack Turnquist
Turnquist, retired and living in Dallas, is a member of the Actuarial Board for Counseling and Discipline, former president of the American Academy of Actuaries, former president of the Conference of Consulting Actuaries, and former chairperson of the Actuarial Standards Board.

Terri Vaughan
Vaughan is the Robb B. Kelley Distinguished Professor of Insurance, Risk Management, and Actuarial Science at Drake University in Des Moines, Iowa. She is former president of the National Association of Insurance Commissioners and a former Iowa insurance commissioner.

APPENDIX C

CRUSAP ADVISORY PANEL

The CRUSAP Advisory Panel includes actuaries who practice in each of the major specialty areas, members of each of the national U.S.-based actuarial organizations, academics familiar with the actuarial profession, and non-actuaries who have used actuarial services. The members of the Advisory Panel are as follows:

Joseph Antos
American Enterprise Institute Wilson H. Taylor Scholar (health care and retirement policy), Washington.

David Axene
President and consulting actuary, Axene Health Partners, San Diego.

David F. Babbel
Professor emeritus of insurance and risk management and finance, Wharton School, University of Pennsylvania, Philadelphia.

Todd Bault
Senior research analyst, Sanford C. Bernstein and Co., New York City.

Howard J. Bolnick
Chairman, InFocus Financial Group, Inc., Chicago. Former president, Society of Actuaries.

Paul Boyle
Chief executive of the U.K. Financial Reporting Council, London, U.K.

Charles A. Bryan
President of C.A.B. Consulting. Former president of the American Academy of Actuaries, former president of the Casualty Actuarial Society, Columbus, Ohio.

Lance Burma
Principal, Milliman, Minneapolis.

Kathleen Buto
Vice president for health policy, Johnson & Johnson. Former deputy commissioner of the Health Care Financing Administration, Washington.

J. David Cummins
Harry J. Loman Professor of Insurance and Risk Management, Wharton School, University of Pennsylvania, Philadelphia.

Stephen D'Arcy
Professor of finance, University of Illinois. Past president of the Casualty Actuarial Society, Champaign, Ill.

Jack Ehnes
CEO of the California State Teachers' Retirement System, Sacramento, Calif.

Richard Foster
Centers for Medicare and Medicaid Services, chief actuary. Recipient of the American Academy of Actuaries Robert J. Myers Public Service Award, Baltimore.

Stephen C. Goss
Social Security Administration chief actuary, Ellicott City, Md.

Alfred Gross
Commissioner of insurance, Commonwealth of Virginia, Richmond, Va.

James C. Hickman
Late emeritus dean and emeritus professor of the University of Wisconsin School of Business, Madison, Wis.

Stephen Jacobs
Attorney, Reinhart, Boerner, Van Deuren, Milwaukee, Wis.

James B. Lockhart III
Director of the Office of Federal Housing Enterprise Oversight (OFHEO). Former deputy commissioner of the Social Security Administration, Washington.

James MacGinnitie
Former president of the Society of Actuaries, Casualty Actuarial Society, American Academy of Actuaries, and International Actuarial Association, Atlanta.

Cynthia Martin
Senior financial services markets specialist, Federal Reserve Bank of Boston, Boston.

Daniel J. McCarthy
Principal, Milliman Consultants and Actuaries. Former president of the American Academy of Actuaries, New York City.

David Otto
Consulting actuary. Co-founder of EMB America, San Diego.

Harry Panjer
Professor of statistics and actuarial science, University of Waterloo. Former president of the Society of Actuaries, Waterloo, Ontario, Canada.

Kenneth W. Porter
Finance director for corporate insurance and global benefits financial planning, DuPont Co., Wilmington, Del.

A. Haeworth Robertson
President of the Retirement Policy Institute. Former Social Security Administration chief actuary, Washington.

Margaret Stanley
Executive director of the Puget Sound Health Alliance, Seattle.

Kenneth A. Steiner
Resource actuary, Watson Wyatt Worldwide, Arlington, Va.

Casey Sylla
Chairman and president of Allstate Financial and senior vice president of Allstate Insurance Co., Northbrook, Ill.

Patricia Teufel
Chairperson of the Casualty Actuarial Society Task Force on Actuarial Credibility. Former American Academy of Actuaries vice president for financial reporting; consulting actuary and principal, KPMG, Hartford, Conn.

Paul Thornton
Managing Director, Pensions Advisory, Gazelle Corporate Finance Limited, London, U.K.

APPENDIX D

INTERVIEWS

Joe Antos
John E. Aschenbrenner
David Axene
David F. Babbel
Todd Bault
Robert M. Beuerlein
Howard J. Bolnick
Paul Boyle
Paul Braithwaite
Charles A. Bryan
Lance Burma
Kathleen Buto
Dave Carpenter
Robert Cooper
Kevin T. Cronin
A. Norman Crowder
Stephen D'Arcy
Rita K. DeGraaf
Robert V. Deutsch
Jack Ehnes
William J. Falk
Richard Foster
Yves Gerard
Jeremy Gold
Stephen C. Goss
Al Gross
Brian Graff
Patricia L. Guinn
James C. Hickman
Patricia L. Huffman
Robert Hunter
Steve Jacobs
Paul Judd
Steven G. Kellison
Bruce Kelly
Kenneth A. Kent
Frederick W. Kilbourne
Stuart Klugman
Ellen Lamale
Richard Lawon
Steven Lehmann

James B. Lockhart III
W. James MacGinnitie
Cynthia L. Martin
Daniel J. McCarthy
Charles C. McLeod
James Murphy
Thomas G. Myers
Melinda H. Oosten
David Otto
Harry Panjer
Rahul Parsa
Steven C. Peck
Peter Perkins
Kenneth W. Porter
Stacey Powell
Ana María Ramírez
Edward L. Robbins
A. Haeworth Robertson
Tom Root
Sarah J. Sanford
Nicole Séguin
Sarah E. Simoneaux
Tom A. Smollen
Margaret Stanley
Kenneth A. Steiner
Jim Stone
Chris L. Stroud
Mark Ruloff
Thomas S. Terry
Patricia A. Teufel
Paul Thornton
Jack M. Turnquist
Therese M. Vaughan
Robert E. Wilcox
Cynthia R. Ziegler
Larry Zimpleman

In addition, a number of other individuals were interviewed who wished to remain anonymous.

APPENDIX E

THE CRUSAP SURVEYS

To learn the views of actuaries and direct users of actuarial services across the United States on a number of important dimensions of contemporary actuarial practice, the CRUSAP Task Force developed two web-based questionnaires—one for actuaries and one for non-actuaries. Two pilot surveys were designed to test the initial questions. Thirty-five individuals responded to the survey for actuaries, and 13 individuals responded to the questionnaire for non-actuaries. The two surveys were then somewhat revised to improve question clarity, and final versions of the two questionnaires were developed and posted on the CRUSAP website (www.crusap.net). Thirteen hundred and sixty-five individuals responded to the two final web-based surveys—1,299 individuals responded to the survey for actuaries, and 66 individuals responded to the survey for non-actuaries. In sum, the CRUSAP Task Force received a total of 1,413 responses to its pilot and final surveys.

The two final CRUSAP Surveys for Actuaries and Non-Actuaries follow on subsequent pages.

American Academy of Actuaries
CRITICAL REVIEW OF THE U.S. ACTUARIAL PROFESSION (CRUSAP)
QUESTIONNAIRE FOR ACTUARIES

Thank you for contributing to the work of the Critical Review of the U.S. Actuarial Profession (CRUSAP). The mission of the CRUSAP Task Force is to perform a thorough review of the challenges and opportunities facing the actuarial profession. The results of this review will be used in guiding the profession in the development of educational, public policy, professionalism, and professional development programs to better serve the needs of actuaries and users of actuarial services.

For further information on CRUSAP, please go to http://www.crusap.net.

In completing this questionnaire, please provide complete responses to all applicable questions. Responses will be reviewed only by the CRUSAP Task Force, Advisory Panel and staff. If you are available to discuss your questionnaire responses, please provide your name and contact information below under question #1, and a member of the CRUSAP Task Force or its staff may contact you. If you have any questions, please contact Mindy Reiser by e-mail at reiser@actuary.org, or by phone at 202-223-8196.

Thank you.

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BACKGROUND (Part 1 of 7)	
1. Name *(optional)*: A. Contact information *(optional): (please provide e-mail address, telephone number, or postal delivery address)*	
2. Actuarial Designations (check as many as apply):	○ MAAA ○ FSPA ○ MSPA ○ FCIA ○ FCAS ○ ACAS ○ FCA ○ MCA ○ ACA ○ FSA ○ ASA ○ EA ○ FFA ○ FIA ○ AIA ○ FIAA ○ AIAA ○ Student ○ None
3. In one sentence, how would you define an actuary?	
4. How many years of experience do you have with the profession?	○ 0-4 ○ 5-9 ○ 10-19 ○ 20-29 ○ 30+
5. Number of years since you earned your first actuarial designation:	○ 0-4 ○ 5-9 ○ 10-19 ○ 20-29 ○ 30+
6. Do you view the primary focus of your daily professional responsibilities as actuarial? A. If no, briefly specify your professional area(s) of focus:	○ Yes ○ No
7. Primary Practice Area: A. If there are other areas of actuarial practice in which you have had substantial involvement, please indicate these as well: If you are currently retired, please indicate here ○ and select your former area of primary practice from among the choices provided at right. Also indicate in the larger box on the right, any other actuarial practice areas of substantial involvement.	○ Casualty ○ Financial ○ Health ○ Life ○ Pension ○ Other

4008

8. For which type of organization, if any, do you currently work? If you are currently retired, please indicate here ○ and select the type of organization for which you formerly worked from among the choices provided at right.	○ Accounting Firm ○ Bank or Thrift Organization ○ Consulting Firm ○ Government *(please specify name of agency and whether municipal, state, or federal)* ○ Insurance Broker ○ Insurance Organization ○ Investment Banker or Advisor ○ Software Developer or Vendor ○ University or College ○ Other
COMMUNICATION/UNDERSTANDING OF USERS (Part 2 of 7) 9. Please identify the primary users of your actuarial services: A. Please assess the understanding, by users of actuarial work, of the role of the actuary and the nature of the service provided, including the inherent uncertainty of actuarial conclusions: B. In your experience, what aspects of actuarial practice, if any, do users have particular difficult understanding? C. How could the understanding of these users be improved? In your response, please specify the group or groups you are addressing.	○ Minimal ○ Some ○ Reasonable ○ Good ○ Excellent

4009

MEETING THE NEEDS OF THE PUBLIC (Part 3 of 7)

10. In your judgment, what are the actuarial needs of the public?

    A. Have you been able to meet the actuarial needs of users of your work?
    ○ Minimally ○ Somewhat ○ Reasonably
    ○ Quite Well ○ Very Well

    B. In your estimation, have other actuaries been able to meet the actuarial needs of users of their work?
    ○ Minimally ○ Somewhat ○ Reasonably
    ○ Quite Well ○ Very Well

    C. What actuarial needs, if any, are not being met by the profession? Why do you think this is the case?

    D. Are non-actuaries meeting any of these needs? If so, what are their areas of professional expertise?

11. What roles in society, if any, do you see as uniquely requiring actuaries and actuarial skills?

12. Is the professional adequately prepared for changes in the future, including:

    A1. International developments, including international accounting and supervision?
    ○ Minimally ○ Somewhat ○ Reasonably
    ○ Quite Well ○ Very Well

    A2. Changes in insurance and capital markets?
    ○ Minimally ○ Somewhat ○ Reasonably
    ○ Quite Well ○ Very Well

    A3. New approaches to risk analysis?
    ○ Minimally ○ Somewhat ○ Reasonably
    ○ Quite Well ○ Very Well

    A4. Changes in approaches to retirement security, including the Social Security and Medicare systems?
    ○ Minimally ○ Somewhat ○ Reasonably
    ○ Quite Well ○ Very Well

    Add your own areas of change:

    A5. Other Area:
    ○ Minimally ○ Somewhat ○ Reasonably
    ○ Quite Well ○ Very Well

    A6. Other Area:
    ○ Minimally ○ Somewhat ○ Reasonably
    ○ Quite Well ○ Very Well

    B. If you answered "Minimally" or "Somewhat" to any of the above, what needs to be done to improve the profession's ability to be adequately prepared in the future in these areas?

4010

13. What are the greatest challenges facing the actuarial profession that could prevent the profession from meeting the actuarial needs of the public? A. How would you recommend addressing or minimizing these challenges?	
14. What are the best opportunities available to the actuarial profession in preparing for the future? A. How would you capitalize on these opportunities?	
EDUCATION (Part 4 of 7) 15. How would you assess the basic education of actuaries? A. In your judgment what, if anything, needs to be changed?	○ Poor ○ Fair ○ Adequate ○ Good ○ Excellent
16. How would you assess the continuing education of actuaries? A. In your judgment what, if anything, needs to be changed?	○ Poor ○ Fair ○ Adequate ○ Good ○ Excellent
CODE/DISCIPLINE/REGULATION (Part 5 of 7) 17. How would you rate the ethics and professionalism of actuaries? A. Please add any further observations you have on the ethics and professionalism of actuaries.	○ Poor ○ Fair ○ Adequate ○ Good ○ Excellent
18. Are there current areas of actuarial practice in which you believe actuaries need additional training? A. If so, please elaborate:	○ Yes ○ No

4011

19. What is your level of understanding of the procedures for the development of:	
A. The Code of Professional Conduct?	○ Minimal ○ Poor ○ Fair ○ Good ○ Excellent
B. The Qualification Standards?	○ Minimal ○ Poor ○ Fair ○ Good ○ Excellent
C. The Actuarial Standards of Practice?	○ Minimal ○ Poor ○ Fair ○ Good ○ Excellent
D. What are the strengths and weaknesses of the profession's processes for developing the Code and Standards? In your answer, please specify whether you are addressing the Code, the Qualification Standards, or the Actuarial Standards of Practice.	
E. How could the procedures be improved? In your answer, please specify whether you are addressing the Code, the Qualification Standards, or the Actuarial Standards of Practice.	
20. What is your opinion of the role of the Actuarial Board for Counseling and Discipline in enforcing professional standards?	
A. What is your opinion of the roles of the discipline committees of the several actuarial organizations in enforcing professionalism standards?	
B. How could the enforcement of professional standards be improved?	
21. A recent review of the actuarial profession in the UK (The Morris Review) recommended that self-regulation of the profession be replaced by a system including independent oversight of the profession's regulation. In your opinion, is the current system of self-regulation of the actuarial profession in the United States appropriate? If not, why not?	
A. What improvements would you recommend?	

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ORGANIZATION OF THE PROFESSION (Part 6 of 7)

22. Actuaries in the U.S. are currently represented by five actuarial associations.* Is this an appropriate structure?

    ○ Yes ○ No

    A. If yes, why is this structure beneficial to the profession and to the public it serves?

    B. If no, how is it inappropriate and how would you recommend changing it?

*The five U.S. organizations are the American Society of Pension Professionals and Actuaries, the American Academy of Actuaries, the Casualty Actuarial Society, the Conference of Consulting Actuaries, and the Society of Actuaries.

SUGGESTIONS TO THE TASK FORCE (Part 7 of 7)

23. Are there specific individuals or groups the Task Force should contact for their input? If yes, please indicate why and provide their names and contact information.

24. Are there other questions the Task Force should be asking, and what are they? Are there any comments you would like to add?

Thank you for your input and support of CRUSAP!

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American Academy of Actuaries
CRITICAL REVIEW OF THE U.S. ACTUARIAL PROFESSION (CRUSAP)
QUESTIONNAIRE FOR NON-ACTUARIES

Thank you for contributing to the work of the Critical Review of the U.S. Actuarial Profession (CRUSAP). The mission of the CRUSAP Task Force is to perform a thorough review of the challenges and opportunities facing the actuarial profession. The results of this review will be used in guiding the profession in the development of educational, public policy, professionalism, and professional development programs to better serve the needs of actuaries and users of actuarial services.

For further information on CRUSAP, please go to http://www.crusap.net.

In completing this questionnaire, please provide complete responses to all applicable questions. Responses will be reviewed only by the CRUSAP Task Force, Advisory Panel and staff. If you are available to discuss your questionnaire responses, please provide your name and contact information below under question #1, and a member of the CRUSAP Task Force or its staff may contact you. If you have any questions, please contact Mindy Reiser by e-mail at reiser@actuary.org, or by phone at 202-223-8196.

Thank you.

BACKGROUND (Part 1 of 3)

1. Name *(optional)*:

   Profession *(optional)*

   Contact information *(optional):*
   (Please provide e-mail address, telephone number, or postal delivery address)

2. For which type of organization, if any, do you currently work?

   If you are currently retired, please indicate here ○ and select the type of organization for which you formerly worked from among the choices provided at right.

- ○ Accounting Firm
- ○ Bank or Thrift Organization
- ○ Consulting Firm
- ○ Government *(please specify name of agency and whether municipal, state, or federal)*
- ○ Insurance Broker
- ○ Insurance Organization
- ○ Investment Banker or Advisor
- ○ Law Firm
- ○ Software Developer or Vendor
- ○ University or College
- ○ Other

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3. Describe your association with the actuarial profession:	
4. With what areas of actuarial practice are you familiar? *(please check all that apply)*	○ Casualty ○ Financial ○ Health ○ Life ○ Pension ○ Other
5. How many years of experience do you have working with the profession?	○ 0-4 ○ 5-9 ○ 10-19 ○ 20-29 ○ 30+
6. In one sentence, how would you define an actuary?	
WORKING WITH ACTUARIES (Part 2 of 3) 7. For what professional needs have you sought actuarial services?	
A. Have the actuaries with whom you've worked met your actuarial needs?	○ No ○ Partially ○ Satisfactorily ○ Exceeded Expectations ○ Exceptionally Well
8. Describe any situations in which your actuarial needs were not met. What could have been done to improve your experience? *(Please provide only a general description of the situation; do not include names of specific individuals or firms.)*	
9. Do you expect the profession to be able to meet your needs in the future?	○ Yes ○ No
A. If not, why not?	
10. What should the profession do, if anything, to improve its ability to meet your actuarial needs?	
11. What future needs do you foresee that might be met by actuaries, but may not be unless the profession proactively readies itself?	
12. What is your understanding of the role of the actuary and limitations inherent in the nature of actuarial work?	

4015

13. In your experience, how well do actuaries communicate the nature of actuarial work and its inherent limitations? A. In your opinion, what would improve actuarial communication (if you believe improvement is necessary)?	○ Poorly ○ Less Than Adequately ○ Acceptably ○ Rather Well ○ Very Well [ ]
14. Actuaries in the U.S. are currently represented by five actuarial associations.* Is this an appropriate structure? A. If yes, why is this structure beneficial to the profession and to the public it serves? B. If no, how is it inappropriate and how would you recommend changing it? *The five U.S. organizations are the American Society of Pension Professionals and Actuaries, the American Academy of Actuaries, the Casualty Actuarial Society, the Conference of Consulting Actuaries, and the Society of Actuaries.	○ Yes ○ No [ ] [ ]
SUGGESTIONS TO THE TASK FORCE (Part 3 of 3) 15. Are there specific individuals or groups the Task Force should contact for their input? If yes, please indicate why and provide their names and contact information.	[ ]
16. Are there any other questions the Task Force should be asking, and what are they? Are there any other comments you would like to add?	[ ]
Thank you for your input and support of CRUSAP!	
SUBMIT CLEAR FORM Return to Top	

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APPENDIX F

Literature

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APPENDIX G

ACTUARIAL ORGANIZATIONS

1. *American Academy of Actuaries.* The Academy was established in 1965 to meet the perceived need for an organizational home for all persons doing competent actuarial work. This was believed to be a necessary precondition to actuarial licensing, which was unsuccessfully sought in the early years. The Academy, nonetheless, became the umbrella U.S. actuarial organization, with primary responsibility for professional standards and for government and public relations. Academy membership at the end of 2005 was 15,398 actuaries.

2. *American Society of Pension Professionals and Actuaries.* ASPPA (originally, the American Society of Pension Actuaries) was established in 1966 to meet the perceived need for an organizational home for pension professionals, including pension actuaries. Its focus has been on government relations and other functions for actuaries and other professionals serving small retirement plans. It was one of the original sponsoring bodies for the enrolled actuary examinations, and it offers education and examination opportunities related to retirement plans. ASPPA membership at the end of 2005 included 691 actuaries.

3. *Casualty Actuarial Society.* The CAS (originally, the Casualty Actuarial and Statistical Society of America) was established in 1914 to meet the perceived need for an organization to meet the actuarial and other needs of the new field of workers' compensation insurance, among other purposes. Its original focus was on social insurance, including workers' compensation, but in more recent years it has covered all lines of property and liability insurance. It offers basic and advanced education and examination opportunities to prospective and current casualty actuaries. CAS membership at the end of 2005 was 4,120 actuaries.

4430*4.* *College of Pension Actuaries.* COPA was established in 2004 to meet the perceived
4431 need for an organization designed exclusively for pension actuaries (specifically enrolled
4432 actuaries). Its purpose has been to promote professional standards and continuing
4433 education for its members, and to represent members and retirement plans before public
4434 policy bodies. COPA membership at the end of 2005 was about 100 actuaries.
4435
4436*5.* *Conference of Consulting Actuaries.* The conference (originally the Conference of
4437 Actuaries in Public Practice) was established in 1950 to meet the perceived need for an
4438 organization designed exclusively for consulting actuaries. Its focus has been on
4439 continuing education and other services for its members and for other actuaries and
4440 interested parties. Conference membership at the end of 2005 was 1,168 actuaries.
4441
4442*6.* *Society of Actuaries.* The Society was established in 1949 to meet the perceived need
4443 for consolidation in the actuarial profession, by means of merging the American Institute
4444 of Actuaries and the Actuarial Society of America. It offers basic and advanced education
4445 and examination opportunities to prospective and current actuaries in all lines of
4446 insurance, except property-liability, and in all areas of retirement planning and other
4447 financial security mechanisms. SOA membership at the end of 2005 was 18,179.