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## Letter from the Task Force Chairman

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3248 **The overriding purpose of any profession is to meet a public need.** People have  
3249 medical, dental, educational, legal, spiritual, and other needs. The public's need for  
3250 actuaries may be obscure and intangible, but it is profound and far-reaching. A toothache  
3251 is perceived to be a more urgent problem than an imbalance between promises and  
3252 resources in a national social insurance program, but neither toothache nor imbalance will  
3253 be cured simply by the passage of time. Actuarial analysis is an essential ingredient of a  
3254 sound solution to the social insurance problem, even as dental care is essential to curing  
3255 the toothache.

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3257 **The actuarial profession, like some but not all other professions, is grounded in a**  
3258 **specific science.** Actuarial science helps to ensure sound financing of private pension  
3259 plans, of commercial insurance products, and indeed of any enterprise concerned about  
3260 the uncertain financial consequences of future contingent events (i.e., risk). The public  
3261 need for actuarial services thus goes well beyond those services now being provided.  
3262 Current demand lags behind the public need, but the actuarial profession is beginning to  
3263 recognize that the additional needs are actuarial, and must be met, preferably by  
3264 actuaries. The demand will follow.

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3266 **Actuarial science is substantially concerned with the uncertain financial**  
3267 **consequences of risk, with the analysis of future costs.** The actuary analyzes and  
3268 estimates the probability that an event will occur, the cost if it does occur, and the time  
3269 value of money in the meantime. This is the essence of actuarial science, and the object  
3270 of most actuarial work.

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3272 The actuary is not precluded, of course, from going beyond the foregoing core of  
3273 actuarial science. Some individual actuaries, for example, may be well suited to conduct  
3274 not only quintessential actuarial work, such as enterprise risk analysis and management,

3275 but also general management and beyond. But **the actuarial profession does have an**  
3276 **obligation to define and defend the field of actuarial science.** The public's need for  
3277 future cost analysis will be best served by an ethical profession dedicated to meeting that  
3278 need.

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3280 **To date, the actuarial profession has done a reasonably good job of meeting public**  
3281 **actuarial needs in insurance and pensions, which may be about one-quarter of the**  
3282 **field defined by actuarial science. The current and future challenge to the profession**  
3283 **is and will be to meet public needs in the other three-quarters of the actuarial field.**

3284 This will require applications of actuarial science within the balance of the financial  
3285 services industry, within other industries, and within government programs beyond the  
3286 national social insurance programs. To achieve this, pioneer actuaries will have to be  
3287 trained and qualified to provide the needed actuarial services. This will be difficult but far  
3288 from impossible. Although these actuaries will be exploring new territory, they will  
3289 remain solidly within the field of actuarial science, with which they are familiar from  
3290 their previous work and training. Several of the actuarial organizations are working  
3291 diligently and effectively to offer this new training to their members.

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3293 Many of the actuarial needs of the public, beyond those covered by traditional actuarial  
3294 services, are either unmet or are being provided by people who may have limited or no  
3295 understanding of actuarial science. On the other hand, some of these needs may be  
3296 adequately met by people who, often without knowing it, are providing competent  
3297 actuarial services. **There may be advantages to making room, within the profession,**  
3298 **for all people who are providing competent actuarial services.** Licensing or other  
3299 government recognition of such people may be a means of establishing minimum entry  
3300 qualifications for the profession, without disturbing the higher qualification requirements  
3301 for recognition as, for example, a Fellow.

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3303 **The foundation of this CRUSAP study and report has been the actuarial**  
3304 **profession's challenge to identify and meet the actuarial needs of the public.** (It  
3305 should be made clear that in this report, references to "needs of the public" do not include

3306 any specific legal duty to the public, such as actuaries have to their clients.) The  
3307 CRUSAP study and report is not the same as an inquiry based on the self-interest of the  
3308 actuarial profession and its organizations, individual actuaries, or their employers.  
3309 Instead, it is an internal study to evaluate how actuaries can continue and expand their  
3310 function of meeting the actuarial needs of the public. This entails asking questions:  
3311 Should the purpose of the actuarial examination process be to prepare applicants to till  
3312 the length and breadth of the actuarial field or to train highly specialized experts in just a  
3313 relatively few crops? Should the individual actuary learn enough about social insurance  
3314 programs to be able to speak out credibly on behalf of non-voters such as immigrants and  
3315 the unborn? Should the structure of the profession serve primarily the needs of the public,  
3316 and only secondarily the needs of actuaries and their employers? This foundation of  
3317 considering first and foremost the actuarial needs of the public has made answering these  
3318 and other questions much easier, and has generally facilitated the course of this study.

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3320 Actuarial education, examination, and qualification standards are all controlled almost  
3321 entirely by the U.S. actuarial profession itself. There are advantages to this system. **Since**  
3322 **the syllabus and exams are prepared by actuarial volunteers with full-time regular**  
3323 **jobs, they tend to reflect current and practical considerations, which prepares the**  
3324 **student well for immediate, productive employment.** Indeed, most actuarial students  
3325 work full time in actuarial positions during their actuarial education, thereby gaining the  
3326 benefits not only of cash income but also of the apprentice system of a bygone era.

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3328 The actuarial exams are rigorous and objective, with each exam typically requiring  
3329 hundreds of hours of study to gain a passing grade. Low pass percentages make them  
3330 even more difficult to pass (of all actuarial exams ever taken, most were failed), and the  
3331 whole process is made harder yet by having to pass five to 10 or more exams under these  
3332 conditions.

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3334 What emerges at the end of this difficult process is someone who is willing to work  
3335 extremely hard and who knows a great deal about what is current and practical in the  
3336 tilled quarter of the actuarial field. The process also yields a collegiality among actuaries

3337 that goes well beyond any class ring or secret handshake. Some would say that this is  
3338 beneficial for actuarial ethics and professionalism since the tempted actuary will usually  
3339 think twice before risking censure by, and exclusion from, the fellowship by shirking his  
3340 or her professional and ethical obligations. Finally, the exams are substantially free of the  
3341 political bias and gender discrimination that have plagued other exam systems, past and  
3342 present.

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3344 There are also disadvantages to the current U.S. system. **Since the syllabus and exams**  
3345 **are prepared by actuarial volunteers with full-time regular jobs, they tend to reflect**  
3346 **current and practical considerations, which may prepare the student poorly for**  
3347 **employment in a changing environment.** They are not always inclusive of the latest  
3348 theories in other fields. Most other professions, and the actuarial profession in most other  
3349 countries, use universities to educate and examine prospective actuaries. Volunteers may  
3350 be more likely than education professionals to design exam questions with ease of  
3351 grading as one criterion, and thus to encourage memorization at the expense of reflection.  
3352 Further, the so-called “travel time” to becoming an actuary is substantial, causing many  
3353 qualified prospects to turn to other professions that will permit them to “get on with their  
3354 lives.”

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3356 **The solution to the actuarial education problem may have several facets. The first**  
3357 **and most important may be to establish and support the concept of actuarial science**  
3358 **as a true science with all attendant responsibilities,** such as devotion to verifiable truth  
3359 and adherence to the scientific method. The current actuarial education organizations are  
3360 working hard and effectively to improve their offerings. They may find that substantially  
3361 increased use of alternative systems, such as universities and on-line courses, will  
3362 improve actuarial education, and perhaps the actuarial exams as well, at least for basic  
3363 actuarial science. Qualification standards for admission to the actuarial profession may  
3364 need attention, as discussed above, and continued active membership in the profession  
3365 could also require continuing education at an acceptable level. It will also be important  
3366 for the profession to continue its efforts to reduce the redundancies and inefficiencies in  
3367 this important area of actuarial education.

3368 Ethics has been much in the news lately, largely in reaction to its conspicuous absence in  
3369 some business and political quarters. While the locus of ethics is to be found exclusively  
3370 in the individual human heart, its foundation can be poured and hardened by institutions  
3371 such as parents, religions, and professions. Reference was made above to the exam  
3372 bonding that has helped prevent leaks in the ethics foundations of actuaries. Perhaps as a  
3373 result, ethical standards have generally been a hallmark of the actuarial profession. The  
3374 organizations charged with educating actuaries have recently added ethics courses to their  
3375 curricula, also presumably to beneficial effect. The ascendancy of peer review  
3376 requirements can, if grounded in ethical considerations as well as avoidance of error, also  
3377 contribute to elevation of the ethical foundation of the profession. **This report will make**  
3378 **a positive contribution to actuarial ethics if its foundational question takes hold**  
3379 **within the profession: “Does this proposed action, or inaction, further or impede the**  
3380 **goal of meeting the actuarial needs of the public?”**

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3382 **The ethical responsibilities of actuaries require that they comply with laws and**  
3383 **regulations, but not blindly.** If the actuary believes that a particular law or regulation is  
3384 contrary to the public interest, he or she has the obligation to refuse to comply (and suffer  
3385 the consequences) or, arguably, to comply while simultaneously announcing the reasons  
3386 for his or her belief. Support for this admittedly debatable contention may be found in the  
3387 first precept of the Code of Professional Conduct.

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3389 **It is important to the credibility of the actuarial profession that the standards and**  
3390 **oversight bodies be transparent and essentially independent of the actuarial**  
3391 **organizations.** These bodies should operate primarily in the public interest and only  
3392 secondarily in the interest of the profession, rather than the other way around. To that  
3393 end, it may be appropriate to enhance the independence of the professional regulation  
3394 boards and to provide a role for people who are not actuaries in the process of standards  
3395 and oversight.

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3397 **A major challenge to practitioners of actuarial science is to convey the uncertainty**  
3398 **that is a persistent side effect of actuarial estimations, without at the same time**

3399 **eroding justifiable confidence in the actuarial work product.** This challenge is made  
3400 more difficult by the fact that the recipient of the actuarial conveyance is usually not a  
3401 scientist, and thus may fail to understand that an expression of uncertainty is not  
3402 necessarily an admission that one is lazy or incompetent. This heightened challenge may  
3403 appear insurmountable to many actuaries, including the majority who are far more  
3404 comfortable with numbers than with words. Nonetheless, the challenge must be met if the  
3405 actuary's good work is to be not only delivered but also received and understood.

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3407 The actuarial profession can help deal with this challenge by promoting the concept of  
3408 actuarial science, and by supporting the proposition that all science is built on a  
3409 foundation of uncertainty, along with other attributes. Research can also be done into the  
3410 causes of statistical and other uncertainty in actuarial work, and into the most effective  
3411 means of conveying that uncertainty.

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3413 **There is a means by which actuaries can gain valuable communication skills,**  
3414 particularly in the important area of communicating actuarial concepts to a lay audience,  
3415 while at the same time helping to fulfill an important actuarial need of the public. **This is**  
3416 **by doing sufficient individual research to qualify the actuary to understand and**  
3417 **convey basic actuarial information about important issues,** such as a national social  
3418 insurance program, a state bond proposal, or a local pension plan.

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3420 **There are several good reasons for the continuation of the current structure (or lack**  
3421 **thereof) of the U.S. actuarial profession.** The profession is small but diverse, and each  
3422 of the organizations serves a purpose for its members that might otherwise be overlooked  
3423 in a monolithic organization. These organizations are working hard, and with some  
3424 success, to augment and improve the services they offer to their members and the public.  
3425 Arguably, free markets and competition are generally more productive and efficient than  
3426 central control and coercion. Finally, several attempts over the past few decades to  
3427 consolidate the U.S. actuarial profession have all failed, and urgent problems with  
3428 feasible solutions take precedence over tilting at windmills.

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3430 **There are also several good reasons for the current structure to be changed.** The  
3431 actuarial needs of the public may be better served by a profession that is not fragmented  
3432 and parochial. Actuarial volunteer time is spread too thin, with much of it concerned with  
3433 redundant functions, and even more with trying to coordinate or compete intramurally.  
3434 Finally, actuaries often think of themselves primarily as members of a special-purpose  
3435 organization and only secondarily, if at all, as members of a public profession charged  
3436 with identifying and meeting public and private actuarial needs.

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3438 The CRUSAP Task Force, composed entirely of U.S. actuaries, has concluded that **the**  
3439 **U.S. actuarial profession should give serious consideration to changing its structure.**

3440 The maxim “first, do no harm” should apply to the process of any resulting  
3441 reorganization. Feasibility considerations should never be ignored, but a condition  
3442 precedent to any mutually acceptable reorganization will be to transform inertia, one of  
3443 the most powerful forces on earth, into momentum. One approach to the question that  
3444 might work is to hold a convention to thoroughly explore whether there can and should  
3445 be a unified actuarial profession and, if so, to determine an effective means of achieving  
3446 that end.

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3448 The purpose of this letter has been to highlight and briefly discuss the key issues facing  
3449 the U.S. actuarial profession. The purpose of this report, and of the study that supports it,  
3450 has been to identify and analyze these issues, and to draw conclusions and make  
3451 recommendations for consideration by the profession. As these issues are considered over  
3452 the months ahead and beyond, the profession is encouraged to keep firmly in mind both  
3453 its purpose and its needs. The two are inextricably interwoven as they move together into  
3454 the actuarial heartland, the future.

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