

NEW FIELDS FOR CONSULTING ACTUARIES

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It is no longer accurate to assume, on meeting a consulting actuary, that his days are spent doing either pension plan valuations or life insurance asset shares. This assumption may never have been completely accurate, of course, but the consulting actuary is increasingly finding new fields for his or her skills, even though this often means that now the nights must be spent doing those valuations or asset shares. These new fields involve broader responsibilities concerning pension plans and life insurance, conventional actuarial work concerning other employee benefits and insurance lines, and actuarial work beyond conventional applications, all for a growing list of old and new types of clients. This paper consists of examples of some of these new fields and concludes with the suggestion that actuaries should define and defend their professional area on a foundation of the public interest.

Most consulting actuaries still work primarily with pension plans or life insurance, and have expanded their professional horizons through assuming broader responsibilities in either of these lines. In the pension area, these broader responsibilities include contract language, employee communications, and negotiations, among others. In the life area, they include tax planning, systems design, and risk analysis, among others. While it may be argued that these constitute new fields for the actuary, such developments in the pension or life areas are well documented elsewhere and will not be explored in this paper.

Employee benefits beyond the retirement program generally require actuarial attention to plan design and funding and more. This has long been recognised with group life and health insurance. New fields for consulting actuaries can be found in other employee benefit programs such as:

- workers' compensation
- vision and dental care
- legal expense coverage
- auto and homeowners insurance.

Examples of consulting actuarial assignments involving the above benefit programs follow:

- A provincial compensation insurance fund planned to combine classifications on grounds of insufficient credibility of experience statistics. An actuarial study was commissioned by an industry trade association. The study and resultant testimony established that the proposed combination was not justified on the stated grounds, and that it would result in enforced subsidisation of employers with unsafe working conditions.
- A state optometric society considered offering a program of prepaid vision care benefits to union members. Tentative premium rates were developed using society survey data, health insurance statistics, and judgment. A five-year projection of pro-

gram financial operations was developed in order to determine capitalisation requirements.

- A local bar association was selected to develop a pilot program of prepaid legal services to be offered as an employee benefit. The consulting actuary participated in the design of the plan, established the schedule of rates to be charged, and wrote the plan and contract provisions. Funding for the assignment was jointly by the national bar association and a charitable organisation.
- A state employee association contracted with an insurance company to offer automobile and homeowners insurance coverage to its members. The consulting actuary provided ongoing counsel to the association concerning these insurance lines and in connection with periodic negotiations with the insurer.

Insurance lines other than term and ordinary life also require actuarial attention to plan design and funding and more. This has long been recognised with medical expense and disability income insurance. New fields for consulting actuaries can be found in casualty and other insurance lines such as:

- workers' compensation
- auto and homeowners.
- no-fault auto
- medical malpractice
- other professional liability
- other liability
- fire and marine
- mortgage and title
- investment
- other lines.

Examples of consulting actuarial assignments involving the above insurance lines follow:

- A state insurance fund became concerned about its solvency and the adequacy of its premium rates. An actuarial audit was commissioned to analyse the claim and contingency reserves and the level and trend of claims and expenses.
- An all-lines insurance group wished to offer simple yet innovative personal lines coverage through its life insurance agents. The consulting actuary designed a property and liability insurance package that covered the risks of auto and home ownership in a coordinated way without specific reference to either.
- A national association of insurance regulators saw the need for an independent and objective system of estimating the financial implications of proposed no-fault auto insurance legislation. A com-

puter-assisted costing system was designed and utilised in over a dozen jurisdictions. Funding for the assignment was jointly by a federal agency and a charitable organisation.

- A state legislature directed the auditor general to determine the probable level of insurer profits in medical malpractice insurance written in the state. An actuarial study was commissioned which concluded that severe industry losses had been sustained for several years.
- A state bar association faced large premium increases in its program of lawyers malpractice insurance, and considered litigation against the insurer underwriting the program. Actuarial work was undertaken to evaluate the experience under the program, and to address the feasibility of establishing a new insurance company to write the line.
- A subsidiary of a private utility conducting ongoing atomic research for an agency of the federal government. An actuarial study of their insurance programs was performed, including review of the coverage and cost of nuclear liability insurance.
- An association of insurance companies contemplated expanding its commercial fire insurance function as a statistical agent to include as well ratemaking services. A joint actuarial/management consulting team conducted a feasibility study for the association.
- A mortgage insurance company questioned whether the ratemaking system used by it and the rest of the industry did the best job for the company and its mortgagee customers. An actuarial study investigated the equity of the premium rates and the adequacy of the contingency reserves.
- A private investment syndicate wished to start an investment insurance company to guarantee a minimum return on a mutual fund program held for ten years. A pro forma statement was developed which showed the need for a substantial capital investment in the proposed company.
- A national financial association considered providing counterfeit insurance to member institutions offering travelers checks and credit cards. An actuarial study was conducted, to determine whether this would best be handled by self-insurance or through the insurance industry or both.

Consulting actuaries have traditionally worked for small to medium-sized life insurance companies or medium to large-sized employers, although this has been expanded to include holding companies and labor unions and others. Actuarial assignments such as those above have been undertaken in recent years for a wide variety of types of clients, including:

- insurance company associations
- insurance executive committees
- special purpose committees
- research and charitable organisations
- rating and statistical bureaux

- prepaid professional service organisations
- medical and other professional associations
- bar associations and law firms
- employee associations and labor unions
- insurance agents and brokers
- monopolistic and competitive state funds
- insurance departments and regulator associations
- state and federal agencies
- state and federal legislatures
- banks and other lenders
- company trade associations
- commercial and industrial corporations
- private investors and individuals.

Examples of a few major assignments for new types of clients include the following:

- An association of workers' compensation insurance companies wished independent and objective analysis of experience under the medical fee schedule in effect. The actuarial study investigated the distributions of fees actually charged, procedures by specialty, and other parameters of interest.
- A committee of chief executive officers of insurance companies sponsored a management consulting study of industry government relations and research operations. The consulting actuary served on the project team and review committee to contribute knowledge concerning the research and other needs and activities of the insurance industry.
- A special purpose committee was formed in a state consisting of representatives of the medical and bar associations, the governor's office and the insurance department, both houses of the legislature, and the state university. An actuarial study was commissioned to evaluate medical malpractice experience and various proposals for coverage and system changes.
- A rating bureau teamed with several insurance associations to sponsor an independent and objective study of insurance classification systems for rating purposes. The consulting actuary served as subcontractor to the prime contractor, a research organisation, in order to provide knowledge and analysis of the structure and use of classification systems in effect or proposed.

All the foregoing assignments and more have actually been performed in recent years, demonstrating that new fields are indeed being explored by consulting actuaries. The list of potential actuarial assignments is even longer and more varied, however, including such hypothetical projects as the following:

- An insurance holding company wishes to offer its agents a straightforward all-lines package combining life, health, auto, and homeowners insurance with a review of the financial needs and risk potential of the insured and his family. The con-

sulting actuary is asked to design the package.

- An international insurance group wishes to enter a major industrial country but is concerned about pending and proposed legislation that would affect the tort liability and health care delivery systems. An actuarial/management consulting project is sponsored to determine several probable scenarios and the optimum marketing strategy under each.
- An international professional association wishes information about the actual and expected mortality of its members. A consulting actuary is commissioned to design a questionnaire and compile data concerning various parameters relating to mortality, and to advise participating members as to their statistically expected longevity, and steps that could be taken to improve the indications.
- A municipality with financial problems wishes to minimise its chance of ruin by making optimum adjustments to tax rates, employee benefit programs, and other parameters relating to solvency. Economic projections are used as input to an actuarial study which explores the financial implications of proposed adjustments when superimposed on various contingency distributions.
- A diversified commercial corporation spends a great deal of money each year on employee benefit and insurance programs that are poorly coordinated and fitted more to the traditions of the insurance industry than to the needs of the corporation. An actuarial risk analysis study is commissioned which develops the insurance needs of the corporation in terms of its aggregate financial capacity, with attention to earnings stability and claim servicing requirements.
- A manufacturer plans to sell a product in a high-risk market which is politically sensitive to charges

of excessive profits. An independent and objective actuarial study is underwritten to price the product on a profit-free basis, but with full provision for recovery of costs as well as for an appropriate return on invested capital and manpower.

Thus, the area covered by consulting actuaries is expanding – but it does have limits. Ours is too small a profession to be afforded the unprofessional luxury of poaching in territory claimed by others with superior expertise, to say nothing of power. We are not accountants, we are not lawyers, and we offer services better provided by other professionals at our peril. We are actuaries, however, and we have the right and duty to defend our territory – assuming that it can be uniquely defined. In keeping with the expansionist tone of this paper – but consistent with the educational requirements to become a qualified actuary – the following definition of our profession is suggested:

The actuary is a professional mathematician and businessman with training and experience in evaluating the financial implications of contingent events, such as personal and corporate risks customarily covered by employee benefit and insurance programs.

The foundation of professionalism is asserted to be the interest of the public, imperfectly represented by the tolerance of the public. It is this which imposes the duty that we define and defend the actuarial profession, and at the same time that we respect the fields occupied by other qualified professions. There are several corollary duties as well, such as that we refuse client assignments that we believe to be contrary to the public interest, that we respect areas of specialisation within our profession, and that we promote and practice effective continuing education. These restraints and restrictions notwithstanding, it is clear that the future – the land of all contingent events – abounds with new fields for consulting actuaries.