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The actuary as a businessperson

by Joe Rafson

Much discussion has been devoted to actuaries expanding beyond their traditional roles. I have one of those nontraditional positions. For the past two years, I have been the financial manager for a small manufacturing firm in the pollution control field, a cry from the insurance company where I was trained.

How did I find myself so far afield? That depends on how you define our area of expertise.

It's an actuarial world

Let's define our actuarial background in generic terms: quantifying uncertain events with limited information into financial, practical actions. Now let's break down that definition into its parts:

- Quantifying — Our business community complains that today's pool of mathematically competent executives is woefully inadequate.
- Uncertain events — Whether an executive is planning on allocation of resources, pricing long-term projects or products, or simply making the decisions any business executive has to make, uncertainty is widespread and inescapable. For the actuary, trained at predicting 10, 20, 40 years, or even longer in the future, general corporate planning would be a natural extension of our training.
- Limited information — To recognize, much less compensate for, imperfect knowledge is rarely seen in the business world.

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Reflections on changes in the profession

by J. Bruce MacDonald

I returned recently from attending the meeting of the International Association of Consulting Actuaries (IACA) in Vancouver. I have attended most IACA meetings, starting with the first one in Munich in 1968. I always find these meetings to be among the most enjoyable and stimulating professional meetings that I attend. I began to reflect on this, trying to determine why.

The big picture

Perhaps it is because the attendance is relatively small, and I know most of the people, who come from all over the world. This is undoubtedly part of the reason, but I go to other small meetings where I know most of those there. Is it because they are held in interesting places, such as Auckland or Elsinore? Not entirely, because some of the locations, such as Bermuda and Hawaii, are of no interest to me, and some, like Toronto and Vancouver, are places I can go as often as I wish. I

concluded that it is because these meetings address the "big picture." When I talk with my friend André Nicolai from Brussels, we don't go into details of Revenue Canada's latest set of inanities and compare them with the Belgian equivalent. We talk of underlying and overriding principles.

Specialization narrows focus

Increasing regulations have made Society meetings much more technical than they once were. The emphasis on meeting continuing education requirements for enrolled actuaries under ERISA makes most pension sessions incomprehensible to anybody but a U.S. pension actuary. Changes in insurance accounting and taxation make those sessions impossible for non-life actuaries. Today it is more difficult to understand much of what is going on outside your own area of practice.

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RESEARCH CORNER

The research activities of the Society of Actuaries continue to progress well, with new efforts focusing on health and solvency issues. The following items are updates on several research projects:

- A new dynamic mortality table for group annuity valuation has a preliminary draft available for discussion purposes.
- Issues relating to long-term care valuation matters have been identified, and the quantitative aspects of this work are about to begin.
- Preliminary results on credit risk research on private placement bonds have been discussed with the companies that submitted data. These findings will be available soon. Commercial mortgage data is being analyzed.
- Data collection continues on the junk bond study. The difficulty lies in obtaining information from a relatively unknown Schedule DM in the annual statement.
- A catastrophic claims health database request for proposal was announced. This project is viewed as an initial step in collecting and analyzing timely health data.
- The initial phase of the option pricing methodologies project has been funded. This introduction to contingent claims pricing models will attempt to provide actuaries with a clear exposition of the various forms of option pricing methods, their strengths and limitations, and a comparison of the models.

Businessperson cont'd

- Financial, practical actions — In a word, business.

The conclusion is obvious: it's an actuarial world. Step away from our tables, lose much of our established data bases, and still, there it is. I have not left the actuarial field, just the usual actuarial environment.

FSA vs. MBA

If I were a CEO at a company of any kind, I'd hire an actuary before an MBA, all things being equal. As a general rule, I'd be hiring a more

mathematically competent and rigorous individual.

A common observation is that most learning comes on the job, rather than in a classroom. There is a good deal of truth in this. My actuarial background doesn't help me haggle with contractors or suppliers, but then, an MBA has not prepared for that skill either. How does an MBA learn that one way of expanding credit in a tight banking environment is by expanding your base of suppliers, thereby floating a larger accounts payable over a larger area? Not in business school, but in the real world, where an actuary can learn the same thing.

This is not to say training, education, and background are unimportant. But what is our training, and how useful is it to the general business community?

From actuary to businessperson

My actuarial training has been excellent preparation for the manufacturing world. Following are a few areas where my experience at a large mutual life company serves me well:

- Business and organizational experience
- Interest and contingent mathematics (fundamental to my current position)
- Pricing competence
- Accounting literacy
- Computer skills
- Budget responsibility
- Bottom line accountability
- General business communication skills
- A little common sense

While this list outlines a few areas of carryover knowledge from traditional actuarial training to the general business world, it does not explain how I use these skills on my job.

The actuarial side of pollution control

My firm makes pollution control systems, usually priced between \$100,000 and \$2 million. These projects take between six months and three years to complete. I set our prices for each custom-designed system. The pricing skills of an actuary are relevant, from estimating costs and variances (including interest costs) to examining our margins and pricing assumptions to make our firm, as a whole, profitable. This includes tracking and distributing overhead costs.

I do our financial forecasting in a fairly straight-forward manner, but my background helps. My training is very valuable when I communicate the plan. My firm's bankers ask fewer questions about our five-year plan, partly because of my credentials. They are impressed to see an actuary working on the figures.

As a financial manager, I also am a consumer of insurance and pension products. My background helps improve my role in this capacity, although less than I might have thought. From the side of the consumer, much of the theory is overridden by questions such as selecting a company to underwrite our small group health insurance plan.

One area where I see traditional "actuarial" growth in the environmental field is in pollution regulation. The Clean Air Act and several states' regulations are moving toward defining acceptable emission levels as the amount that causes less than one cancer death per million exposures over a 70-year period. Addressing this question will call for a merging of medical research, actuarial expertise, and legal talents. It will require working with a large number of decrements in an equation that is a leap beyond commonly applied actuarial mathematics.

Conclusion

If actuaries want to move into general business careers, including positions inside insurance companies and consulting firms, we must be more responsive to the non-actuarial aspects of our positions. This may not be as easy or natural as it sounds. We have to be more open to input from outside our profession. We may need some re-education and probably need to re-think the scope of our profession.

If we intend to compete in a general business environment, we also must be prepared for a different risk/return setting. We must move away from the traditionally sheltered actuarial field, where competition is relatively limited and credentials and exams sometimes matter an inordinate amount. However, stepping into new business situations may lead to greater opportunities, both in positions available and in bringing a broader range of expertise into our profession.

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