

## EDITORIAL AND ANNOUNCEMENTS

### ACTUARIAL EDUCATION URBI ET ORBI?

Actuarial science was born in the 17th century:

- Fermat and Pascal had successfully solved the 100 year old “problème des pistolets” and thus defined the rules for a solid calculus of probability.
- John Graunt had published the descriptive statistical analysis of demographic data in his “Observations made upon the Bills of Mortality”.
- The Huyghens brothers had given a probabilistic interpretation of Graunt’s tables.
- Edmond Halley had explicitly constructed a mortality table based on the yearly numbers of deaths observed in the city of Breslau.
- Jan de Witt had introduced the compound interest technique for the value of an annuity.

In the next century, all these elements were put together and became the fundamental pillars for the sound management of life insurance. Those who did so can rightly be called the first actuaries: James Dodson, Richard Price, William Morgan.

Although the title of actuary was used by the chief executive (and chief mathematician) of the Equitable Life Assurance Society from 1762 onwards, it seems that the title did not come into general use in British life insurance companies until the early 19th Century. The foundation of the Institute of Actuaries in 1848 and the Faculty of Actuaries in 1856 finally created the professional bodies which justified this title. In other countries the development was even slower, but one might say that at the turn of the 19th to the 20th century most European countries as well as the United States and Canada had founded their actuarial organization with the more or less similar purpose of allowing their members to use actuarial titles.

At present, it is general international practice to call each member of any national actuarial organization an “actuary”. As long as the actuary only works in his “home market” one can live with this nomenclature. However, right now more and more national barriers—in particular for economic activities—disappear. For the actuary this means that his profession grows far beyond national frontiers.

Who is then such an “international” (in the full sense of the word) actuary? How does one become such an international actuary?

Typically, the modern actuary is an expert in only one of several fields (life insurance, pensions, general insurance...), but unless we want to split up the profession into several disjoint subgroups, it is essential that the actuary has a general understanding of all actuarial activities. This general understanding has also to become international, since the international actuary must understand what his colleagues brought up in other educational systems and working in different legal and cultural environments are doing.

This modern, internationally oriented, actuary needs a very sound education, which gives him a basis on which he can develop his actuarial skills, and also the ability and desire to be constantly improving those skills. It is counter-productive to aim at a uniform actuarial curriculum. These rather general goals of actuarial education are better attained by a diversity of educational systems.

It is a gross simplification, but one that we shall nevertheless make, to characterise the present systems of actuarial education in two categories: the professionally oriented systems, common in the Anglo-Saxon world, run by the professional actuarial associations; and the university oriented systems common in continental Europe, which emphasise more the mathematical foundations of actuarial science. Both systems have their defenders, who may feel that those educated in the other system are not “real actuaries”, in the sense in which they understand the term.

The world needs both systems. If the professional practitioners lose touch with the ever-expanding mathematical foundation of their subject, they will find that they are no longer the technical experts their predecessors were. On the other hand, if actuaries devote themselves solely to the ivory towers of mathematical complexity, they will find that others start to provide the practical advice that insurance companies, pension funds and other financial organisations require.

The Groupe Consultatif (the liaison group of actuarial associations in the European Communities) has begun to compare in detail the educational systems within the European Communities. Even this is an immense task, made harder by different languages, different methods of teaching (lectures, text books, correspondence courses...) and the fact that those making the comparisons have already full-time jobs elsewhere.

The diversity of educational systems, which we believe should continue, needs, however, to be associated with explicit codes of professional conduct. The actuary must know the limitations of his (or her) own expertise, and must accept the consequences whenever he gives advice to others who may rely on it.

We do not need a streamlined international education system for actuaries, but we do need internationally compatible and enforceable ethical codes of conduct. Whether this is organised through the International Actuarial Association or through some other international actuarial organisation, which takes a professional rather than a scientific role, we hope that the diversity of actuarial education systems is recognised and preserved, while still allowing those actuaries, who wish to carry the responsibility, the opportunity to offer their expertise throughout the world.

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