

Risk evaluation

Risk has attracted greater interest in recent years

The Institute of Risk Management and Risk Managers in general have, for many years, had a risk management approach, causing a systematic approach of identification, control, risk financing and administration. This has received greater publicity more recently with the rising profile of corporate governance and reports such as Turnbull. The Financial Services Authority (FSA) will require financial institutions to have a financial condition report demonstrating they have enough resources to meet commitments arising from the risks they face. These cover not only financial risk but also difficult to quantify risks, such as people risks.

The Institute of Actuaries Paper on Financial Condition Reporting (FCR) in March 2001 identified two areas needing consideration in conjunction with assessment of risk. This involves identifying and assessing individual risks and the collective impact on the organisation as a whole. Actuaries have been involved in modelling insurance risks for many years, covering not only traditional mortality risks but, more recently, a broad range of general insurance risks. Actuaries have developed investment models and their application to the assessment of investment risks, in the context of managing financial institutions and broader fields of risk management.

Actuaries have also included modelling risks in finance including project finance and credit models, a natural extension of work undertaken for many years in the insurance and investment fields.

More recently, there has been greater actuarial involvement of the development of physical models, often in conjunction with other professionals, for example the Risk Analysis and Management for Projects (RAMP) project derived from the working party of the Actuarial Profession and Institute of Civil Engineers (ICE). Other areas covered are building models to assess asbestosis risk and pollution and environmental risks. In each case work with other experts is required in the areas of physical or legal risk.

Risk discounts is an area where actuarial thinking is evolving in conjunction with financial economists with actuarial input into the assessment of risk neutral probabilities, martingales and similar techniques. These are much more akin to the work of financial engineers than the traditional approach of high hurdle rates for the assessment of risk. The latter is fundamentally unsound, as some of the uncertainties are a factor of the discounted very high rate. The risk neutral approach changes the choices an organisation faces.

In the broader area, actuaries have begun to study operational risk. This work is being encouraged by the Basel requirement that banks hold capital against operational risk as well as the FSA's approach to FCR. Working parties have been established to undertake this modelling .

The "Strat Risk" project has been set up, with the ICE, to look at strategic issues arising from individual risks.

The March 2001 paper emphasised that assessment to individual risk was by no means enough. It is essential to look at the impact as a whole and the overall diversification benefits. Actuaries are at the forefront of building financial models for insurance companies, so called Dynamic Financial Analysis (DFA). This work is possible because of the availability of cheap computing power enabling the assessment of the various tail probabilities and more complex risk measures necessary to undertake this work. Actuaries are one of the professions that have this holistic approach to risk and many actuaries will be involved in preparing financial condition reports suggested by the FSA, even though they cover risks that are traditionally not actuarial. The Profession is arranging working parties and seminars to develop work in this area and forge relationships with other professionals to undertake this work.