Risk assessment is a vital discipline for the development of well-balanced individual life & accident portfolios. This activity, practiced to a greater or lesser degree depending on the country, calls on a range of highly specialized expertise.

SCOR Vie is taking advantage of the launch of the new version of its web-based tool Sar@ to provide in this newsletter a glimpse of the principal facets of this activity, which is a key service provided by reinsurers.

Whether you are an experienced or future user of this service, do not hesitate to contact your usual SCOR Vie correspondent for further details.

Romain Durand, Chief Executive Officer, SCOR Vie

A key stage in the underwriting process

Life & accident insurance, like all other categories of insurance business, spreads the risk over the insured population.

A classification of risks into homogenous groups, reflecting a legitimate concern for equity, makes it possible to spread risk in an efficient manner. To do this, it is necessary to apply an appropriate pricing to each class of business to ensure that differences between policyholders in the occurrence of the guaranteed event are chiefly based on normal statistical variations rather than on significant differences in the risk profiles. This is the most efficient way to manage claims experience.

Risk profiles are classified on the basis of information provided by the policyholders when they take out their insurance cover. This is what constitutes risk assessment, a key stage in the insurance of individual mortality, disability, and long-term care (LTC) risks. Assessment is carried out in several broad areas: analysis of medical files, examination of special risks (professions, transport, place of residence, sports, etc.), and financial analysis depending on the purpose of the insurance cover.

Risk assessment is an extremely concrete, highly expert activity, in direct contact with the policyholder. This profession, recognized as such in the most highly developed markets for life & accident insurance (USA, Canada and UK in particular) is less well known in continental Europe.

Reinsurance is the natural source of this expertise for insurers. SCOR Vie has made this expertise and related services an integral part of its range of reinsurance products. This newsletter presents the principal aspects of this fascinating activity, and of this vital service to your activities as an insurer of individual risks.
The risk assessment technique

The purchase of a contract providing loan protection insurance, family protection, inheritance tax protection, key person insurance or LTC cover (to mention only the most common solutions) can be a decision made by a private individual. Under these circumstances, the insurer is faced with two main concerns:

- The asymmetry of information possessed by the policyholder and the insurers techniques and processes are required to avoid anti-selection liable to compromise the balance of the portfolio of insurance contracts;
- The establishment of an insurance solution priced at a level corresponding to the risk insured.

This situation leads to the risk assessment work carried out by the insurer. Using standard actuarial pricing schemes based on an average risk profile for the target clientele in question, the aim is to identify those applicants presenting a so-called "substandard" risk profile. This notion of substandard risk applies to the medical profile as well as to factors such as place of residence, professional activity, frequency and type of travel, and practice of sporting activities. The reason why insurance cover is sought and the amount of sum insured complete the risk profile.

Assessment is based on certain information obtained from a questionnaire that the person applying for insurance must complete. It goes without saying that the information required must be objective and quantifiable. The questionnaire may be exhaustive or only include a few questions. The type of insurance product in question (mass market or niche market, for example) and the risk to be covered (mortality, disability, LTC) also determine the choice of questionnaire to be used.

There also exists, if required, a number of specialized questionnaires devoted to specific medical conditions, professional and/or sporting activities. In the area of financial underwriting, a financial questionnaire supported by a series of specific appendices corresponding to the purpose of the insurance—family protection, loan protection, key person, inheritance tax cover, business partner protection—is used for the quantified and legal justification of the need for insurance cover. Additional items (medical examinations, financial documents such as balance sheets, financial statements, calculation of inheritance tax, etc.) are typically required in support of these specialized questionnaires. It should also be emphasized that the older the age of the applicant and the sum insured, the greater the amount of medical information is likely to be required in support of the questionnaire. It is the non-medical limits developed for each product that specify the information required.

The assessment process then consists of analyzing the information gathered with a view to obtaining, if necessary, a quantified appraisal of the increased medical, professional, sport-related risks, etc. In certain cases, limits on the insurance cover may be proposed if it appears impossible to rate certain aspects of the increased risk. Financial underwriting, for its part, consists in validating the amount insured and the insurance arrangement covering this amount. If necessary, investigations can also be carried out within the framework of an anti-fraud action, on the basis of pre-determined criteria liable to uncover an attempt to launder money or to commit insurance fraud.

In order to carry out these analyses and appraisals, the reinsurer relies on its own "underwriting manuals"; the reflection of its own expertise. What is more, the reinsurer, and SCOR Vie in particular, is also required to examine new, rare or complex cases that deviate from usual standards. To enhance its assessment expertise and offer insurance solutions for increasingly complex cases, SCOR Vie has developed a research & development activity. For example, thanks to this research work, rates are regularly provided for cases involving cancer, organ transplants, HIV infection or hepatitis C contamination in particular, or yet again, special risks, cover for expeditions to the Himalayas or for transoceanic skippers, etc.

Over the past ten years, another approach has also been developed, chiefly in North America, known as "preferred risk" consisting in identifying applicants presenting a better-than-average risk profile with a view to offering them more appropriate and (above all) more attractive rates according to the categories defined in this approach. Usually organized around a "smoker" or "non-smoker" status, these categories make it possible to classify applicants on the basis of criteria that typically include: body mass index, family history of medical conditions (death of one or more of the applicant's parents, brother or sisters before the age of 60 as a result of a hereditary illness), cholesterol levels and, as far as the lifestyle profile is concerned, driving history, alcohol consumption, criminal record, etc. Although it is now widely used in the United States and Canada, the "preferred" approach to risk assessment requires careful handling in its interactions with the basic actuarial pricing, in its implementation on an everyday basis, and overall monitoring.

1See SCOR Vie Technical Newsletter n°14, October 2003: Financial underwriting
2See SCOR Vie Technical Newsletter n°15, November 2003: Insurers face up to insurance fraud
The underwriting delegation enables the reinsurer to focus on the more complex risks or those involving the highest amounts of sum insured.

Efficiency in the assessment activity is based on four key elements:

- A team of specialists,
- An appropriate organization,
- A treaty,
- A set of tools.

The rating of substandard risks is a specialized activity that is usually learnt on the job; vocational training in certain countries completes, or confirms, experience acquired in the field. Underwriters also refer to medical directors, special risk specialists and experts in financial underwriting in the most complex cases.

The work of medical directors in the insurance industry is a specialized activity where expertise is acquired with experience through the analysis of cases. It is the medical directors who make it possible to pursue this research & development work thanks to their membership of the medical profession and the fact that they practise medicine themselves and monitor medical progress.

Specialists in special risks seek out and analyze information and statistics available for the different professions, sporting activities, means of transport and places of residence. This research must be carried out on a permanent basis in view of the changing nature of these risks.

As far as financial underwriting is concerned, the development of state-of-the-art expertise is also necessary in financial analysis and the arrangement of insurance solutions for the examination of complex insurance cover involving large sums of money.

The organization of the assessment activity is based on case analysis and the ability to verify whether the information gathered matches the adopted company underwriting criteria. It consequently relies on an efficient access to knowledge about the underlying insurance products.

A timely response is also an essential element because this assessment phase is just one stage in the insurance contract writing process and is subject to pressure from a competitive business environment.

The relationship between insurers and reinsurers as far as risk assessment is concerned is set out in the treaty between them. Within this framework, assessment can form part of the services provided to the insurer by the reinsurer. This service exists at various levels depending on the extent to which the insurer already possesses in-house assessment expertise, and the capacity of the treaty, which is the maximum amount of sum insured stipulated by the treaty. The reinsurance treaty usually includes an underwriting delegation, i.e. limits in terms of sum insured and/or increased risk under which the insurer proceeds with the assessment of the risk on the basis of rules agreed with the reinsurer and beyond which all cases must be submitted to the reinsurer.

This split of roles means, in practice, that the insurer is able to handle the greater volume of risks underwritten in the most highly efficient way possible. In return, the delegation relationship for the reinsurer means that he can focus on the more complex risks or those involving the highest amounts of sum insured.

Above and beyond the automatic capacity, the reinsurer can provide a facultative capacity for the insurer: in this case the reinsurer takes responsibility for the risk assessment work. This type of consultation for “facultatives” is a significantly more developed market in North America than in Europe, notably because insurance for large amounts of sum insured is far more frequent in that part of the world.

The assessment work does not necessary stop at the time the policy is accepted; regular monitoring of the process is also necessary. This monitoring can form part of the regular auditing of cases handled, or be included in an internal or even external audit. External audits are the natural role of the reinsurer as a counterpart to the delegation granted within the reinsurance treaty for the underwriting process. In this case, the reinsurer can act in an advisory capacity. Monitoring is also based on an analysis of potential claims: the type of claim is then compared with the assessment made in order to detect any malfunctions in the assessment process or to draw useful lessons regarding future changes in the approach and assessment technique.

As far as tools are concerned, the underwriting manual is the most important. It represents a large part of the reinsurer’s expertise and may be made available for the use by insurers. Although for many years these manuals only existed in printed form, they now benefit from technological innovation.

In this respect, SCOR Vie has developed a web-based interactive underwriting tool known as “Sar@”. 
At the beginning of the 1990s, SCOR Vie developed an interactive computerized underwriting manual for its customers. This manual was then adapted to make it available, in 2000, on the Internet under the name of Sar@. Changes made to Sar@, whose dissemination is simplified thanks to the web, are still continuing with the constant desire to enhance its content and optimize its use to ensure a rapid, and rigorous, treatment of cases.

Sar@ incorporates two “manuals”:


These underwriting manuals are backed up by a documentation base accessible at all times, and boasting a rich content of more than 2,000 documents (help sheets, assessment documents and technical publications).

Sar@ enables the underwriter to carry out a detailed analysis of the applicant’s file and to determine, for each identified risk factor, its impact on the insurance rate. The underwriter ultimately obtains a comprehensive analysis, enabling him/her to provide documented backing for his decision.

One of the advantages of Sar@ is the precision of the pricing schedules presented. By leaving little room for interpretation, Sar@ makes the underwriters’ decisions more reliable and reinforces the consistency—and, therefore, the rigorousness—of the assessment and pricing work. In this respect, Sar@ is also a self-training tool for risk underwriters.

Today, the second version of Sar@ in its web-based form is available. A host of improvements, some visible, others less apparent because hidden within the system, have been made, notably to reduce the time devoted to analysing a case. As a result, Sar@ can be used just as well by experienced underwriters—by providing rapid access to the result—as by junior underwriters by allowing them to break down the different steps in the underwriting process.