



Risk assessment

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1. Introduction

It is not only the insurance industry which carries out risk assessment. Indeed, the assessment of risks can be identified as a necessary preliminary phase in any decision making process, and in particular within any area of business management. It is even possible to see this type of process in our every-day lives. Risk assessment is not even the exclusive preserve of the human species.

We will however concentrate on the first of these mentioned worlds.

2. Definition and basic concepts

As it is such a widespread process and intuitively understood, it is not so difficult to define risk assessment. This process is understood to be the identification of risks which have an impact on the carrying out of an activity of interest in order to, after comparing it with a decision making criterion, arrive at a sufficiently solid (and well founded) conclusion concerning the acceptability, or otherwise, of the cited risk.

It should be noted that there are no absolute criteria for acceptability, and it is also not possible to totally nullify the risk, it is therefore always possible, and in fact it does happen, that something which is unacceptable for one is acceptable for another, and vice versa. It is precisely this relativity of the process which makes it particularly interesting from the point of view of this article and which perhaps forms the essence of business and insurance.

In general, in addition to this conclusion of acceptability with respect to the above mentioned assessment criteria, it is normal, and certainly constructive, to add suggestions, requirements or recommendations so as to improve the risk conditions.

The assessment process involves at least the following tasks:

- Identification of risks.
- Definition of acceptability criteria.
- Comparison of reality/criteria.
- Establishment of acceptability conclusions.
- (Improvement recommendations).

As we will see later, as this is such an intuitive process, this list is not always easy to apply, and, what is worse, not all the processes are always completed.

3. Risk assessment and insurance

Although it is not always totally explicit, the acceptance of a risk always involves a process of risk assessment on the part of the insurer.

This fact is true in all lines of our business, including, naturally, purely financial lines. Each one of those lines of course requires a different treatment, and it would not be possible or desirable to extend the scope of this article to include them all. We will therefore concentrate on the risk assessment process within the area of material damage, although, as has been mentioned previously, the approaches which will be outlined here can easily be extrapolated to cover the majority, if not all, of the other lines.

The first point which must be considered is the framework or scope of the assessment; by this we mean the type of risk (material damage, loss of profits, financial, engineering, etc.) which will be assessed. We will concentrate on material damage, and more specifically on fire and explosion risks.

The second, and fundamental, point is the objective of the assessment. Therefore, the objective of a fire inspection may be to verify that regulations are being adhered to, or to determine the insurability of the risk. This does not have to mean that the two objectives are necessarily different, but neither should the



opposite be assumed. This is too often forgotten, perhaps because it seems too obvious, but it is essential that the risk assessor takes account of this, above all if, as is frequently the case, the risk assessor is not the same entity as the risk taker. This definition of the objective is not only relevant at the time of establishing acceptability criteria, but also to determine the information which the risk taker needs to reach his conclusions. Therefore concerning the first, it may not be of great interest to know the loss history of that being evaluated, but for the second it is easy to appreciate that is practically vital.

Finally, it is important to point out that, despite the conceptual simplicity of the process, risk assessment involves an important element of **uncertainty**. This uncertainty arises principally from the very concept of risk, in which a possibility for material damage of uncertain magnitude is combined with a particular probability that this damage will occur. From the point of view of acceptability, at least on a purely theoretical level, the magnitude of the damage is just as important as the probability. In many cases this is the fundamental and critical factor.

Allow us to examine a simple example from everyday life to illustrate this contention: a passer-by who crosses (or rather, decides to cross) a city street at a traffic light. Possibly without being conscious of it, he is carrying out a risk assessment which is not at all trivial. He takes his decision aware of the possible dangers to which he would be exposed if he were run over, but is encouraged by the low probability of this occurring whilst the traffic light permits him to cross. This does not of course mean that there is no risk.

Unfortunately, on many occasions we see, or we receive risk assessments which determine their acceptability conclusions by magnifying the most easily identified possible risk factor, and undervaluing the probability factor. As we

know all too well, this frequently occurs in the case of novice assessors who, like inexperienced citizens, prefer to wait until there is no vehicle at the traffic light before crossing.

It is therefore necessary to set up a number of measures in the risk assessment process to adequately «adjust» the necessary balance between the magnitude of the danger and the probability, so as not to allow streets which deserve to be crossed to remain uncrossed. Although not complete, we believe that the following are necessary precautions: put the process in the hands of assessors with adequate experience; use assessment methods which allow us to increase (we can not talk of assuring) the objectivity of the conclusions and lastly, use the new simulation tools which today's computer technology has given us. The reader can find further details concerning this point in this and the previous issue of Trébol.

4. The risk assessment process

So as to conclude this review of the main points to be considered to ensure an appropriate and efficient evaluation of risks, there follows a list of the phases which the assessor should follow:

- **Definition** of the scope and objectives of the assessment.
- **Preparation** of the process. There are at least three aspects to consider in this phase: the definition and familiarisation with the acceptability criteria; familiarisation with the general characteristics of the activity to be assessed and lastly the advance establishment of the information which will be required during the assessment phase, and the identification of the parties with whom information should be exchanged.
- **Inspection**, during which the required data are obtained and a **personal verification** is made of the various aspects of interest.
- **Assessment**, during which the various characteristics relevant to the activity being evaluated are es-

tablished from the information collected in the previous phase, these are then compared with the applicable acceptability criteria. It should not be forgotten, as has already been mentioned, that these criteria are relative and not absolute.

– The formulation of well based acceptance or rejection **conclusions**. It is especially important to establish solid criteria to back these conclusions so as to allow their supervision and posterior amendment and to determine improvement conditions for the final conditional acceptance of the risk.

– Lastly, it is advisable, and without doubt constructive, to finalise the assessment process by making suitable **recommendations** to improve the characteristics of the risk. This step is of value even for risks which are already considered acceptable as their quality will also improve and at the same time it will be possible to offer more favourable, and therefore more competitive, conditions.