CHAPTER 1

RISK CONCEPTS

Risk can be identified, measured, controlled and financed; this is the bedrock of the discipline of risk management. This task can be approached mechanically in terms of identifying a problem, finding a solution and then applying it. However the individual risk problem is part of a complex risk situation where the physical circumstances, the attitudes, knowledge and motivation of the players and the social circumstances all interact.

The risk management practitioner must therefore have a good working knowledge or risk concepts and especially people and risk. At first sight it can be a daunting problem as risk is ubiquitous and the potential amount of detail involved unlimited. Therefore concepts and structure are important tools in understanding and managing risk. In this chapter we look at some risk ideas.

RISK DEFINITION AND CONCEPTS

A good starting point is the meaning of "risk", defined by the Concise Oxford Dictionary as "hazard, chance of bad consequences, loss etc., exposure to mischance". So risk is something or some event that can cause harm, or loss. But risk is not always loss causing and some risks cause both loss and gain (usually to different people as with the extra work that a repairer gains after a bad storm.

Risks can be of different types. They maybe physical, causing direct harm or damage, or social, causing loss of reputation or damage to self-esteem. The objects affected by the risks equally vary from physical property and people to non-physical property such as ideas and reputations.

Trying to put risk in the widest possible framework it could be considered as future uncertainty or anything that could occur to prevent the expected or planned future happening. The context will thus depend on the circumstances, it might be safely crossing the road, building a new factory, carrying out an operation, arranging an election or making a friend.

From here, the factors in risk can be considered. Some are physical and are understandable within the context of physical laws discovered by past generations. A distinction has to be made between the risk that is natural such as an earthquake and the effect of the risk on man-made situation or property. With sufficient care and knowledge the impact of earthquakes can be reduced by thoughtful siting of buildings and the incorporation of earthquake-resistant features in the design.

Sometimes the risk is not conscious. One can assume that the original use of polyurethane foam in cushions (which gives many advantages), did not consciously ignore the poisonous gas hazard from burning furniture.

There are additional layers of risk. The circumstances of an individual accident or fire may not be foreseen and sometimes may not be foreseeable. The new risk situation arises from a combination of circumstances.

As well as the peculiar physical circumstances of a loss situation there is the behaviour of those involved. This maybe knowledgeable or unwitting, accidental or deliberate. It may have objectives that are aimed at good results, aimed at causing harm, or the individuals concerned maybe indifferent to the possibility of harm. There are many other aspects of human behaviour such as concern or indifference that directly influence the outcome of a risk situation.

Because of the infinite number of possible circumstances and combinations it is perfectly possible for well intentioned measures to have the opposite effect. Often a well-meant action results in unpleasant and occasionally horrific consequence that are not foreseen.

The range of possibilities and eventualities points to the knowledge tools needed by the risk manager which include, not necessarily in order of importance.

- Physical sciences,
- Finance and economics,
- Statistics,
- Human behaviour,

and to some extent many other subjects.

RISK MANAGEMENT

Risk management can be seen as a collection of techniques used in a co-ordinated and flexible manner. It is essentially a multi-disciplinary process where different skills and disciplines are brought together in risk problem solving. How it is applied will depend on many factors including:

- Individual levels of knowledge and awareness;
- Management and individual style and inclination;
- Operational capability of the firm factory, team or individual;
- Social style and culture;

Furthermore, managing risk within a corporation implies a three-fold approach:

1. Formal system of risk/threat
   - Identification anticipation;
   - Measurement/evaluation,
   - Control,
   - Recording information and decisions,
   - monitoring results.
2. Adopting measures for economic control that either:
   - produce a measurable reduction in the overall cost of risk (insurance plus loss Control plus self insured losses) and/or
   - help to ensure the company's survival whilst minimising the overall cost of risk control.

3. Establishing management responsibilities for risk.

The potential for applying risk management is very wide. Apart from the insurable risk area it includes:

- Commercial risk: evaluating trade-off between risk and return;
- Political risk: recognising threats in the environment and keeping the company in balance;
- Social risk: dealing with risk problems in a social context;
- Project risk: ensuring on-time, on-budget performance;
- Computer risk: the special vulnerabilities in EDP (Electronic Data Processing);
- Military risk;
- Personal risk: handling various threats to the individual.

Application in each area will require analysis of the physical situation and consideration of both the social circumstances and the motivation and attitudes of the players. One of the biggest problems in practical risk management is the reluctance to recognise that risk management performance is closely related to organisational competence and objectives. This means that it is difficult to solve risk management problems in a badly managed company and that any risk management activity may create considerable conflict. It is not a problem peculiar to risk management; many areas of management produce a conflict between personal and organisational objectives.

Tasks in Risk Management

Returning to the opening concepts, the four-stage approach to risk management is not necessarily compartmentalised:

Risk identification - the recognition of risks that can threaten the assets and earnings of a business enterprise.

Risk measurement - estimating the likely probability of a risk occurrence and its probable or possible severity.

Risk control - measures to avoid the occurrence of a risk, to limit its severity and reduce its consequences.

Risk financing - determining what the cost of risk is likely to be or might be and ensuring that adequate financial resources are available.

Risk Concepts

The hardest of these four tasks is risk identification because it requires a great deal of foresight. It is all too easy to miss a risk, albeit improbable, that could have disastrous consequences. By contrast risk control and risk financing are somewhat easier. There is a large range of available techniques for limiting and eliminating risk with well developed practice. Insurance provides risk financing for many (insurable) risks; the main problems for a risk manager are understanding what cover is being made available (due to the complexity of many wordings) and securing an optimum price.

The essential base of risk financing is the concept of cost of risk which can be measured in terms of cost of three variables:

- risk control measures;
- uninsured losses;
- insurance.

The variables work together but not necessarily proportionally. Risk control measures may result in lower levels of uninsured and insured losses. A lower loss level may make possible lower premiums but these will not automatically be achieved.

Checklist: identifying risk

Pre event - Key management decisions

Management selection	Business type	Consequence
Risk profile	Equipment	
	Location	Potential
	Mode of operation	Profit or loss
	Uniqueness	
Relationship	Market total size	
	Competitor activity	
	Price acceptability	
	Government restraint	
	Customers	
	Suppliers	
Considerations	Technical developments	
	Political	Inter-relationship
	Social	
	Physical environment	
Expectations	Achievable volume and price	
	Cost pattern	
	Dependencies	
Structure	Staffing	
	Competence	
	Commitment	

During event - Operational successes determined by staff decisions or leadership

Operations compliance (Risk handling)	Budget	Consequences
	Operational standard including Safety and loss control	Profit and loss
	Risk awareness	
Gradual change (fast or slow)	Technical	
	Political environment	Inter-relationship
	Social environment	
	Physical environment	
	All relationship	
	Staff level	Wastage
	Staff capability	
Occurrence of significant event	(Insured or non-insured)	Property loss
		Consequential loss
		Liability loss

Post event - Contingency planning to deal with "events" that may disrupt plans

Contingency planning (recovery)
Identification of change/events
Preparation and evaluation of alternatives)

Training in disaster	)	Potential for reduction in actual loss
Preparation in handling	)	