

*Understanding
and Managing
Risk Attitude*
Second Edition

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GOWER

Risk Management Status Quo – Efficient but not Effective?

THE RISK ENVIRONMENT

The Danish Nobel Prize-winning physicist Niels Bohr (1885–1962) rightly said that ‘Prediction is very difficult, especially about the future.’ And yet people constantly seek to look ahead in an attempt to see what might be coming, to prepare themselves to respond appropriately and to be best positioned for all eventualities. This is true of individuals, families, communities, teams, organizations, businesses and nations. Each tries in different ways to predict the future for their own advantage. This may be a unique characteristic of humans as we attempt to make sense of our environment and our place within it, since forward planning seems to be both an innate skill and a psychological necessity that features in nearly all human activity.

The key factor underlying the difficulty in predicting the future is the existence of *uncertainty*. As Plato (427–347 BC) realized, ‘The problem with the future is that more things might happen than will happen.’ With an infinite number of possibilities ahead, it is hardly surprising that the task of selecting the one which will eventually materialize is problematic. And as the time horizon of prediction extends further into the future, the number of degrees of freedom increases exponentially, further complicating the ability to predict. In the desire to increase predictability, considerable attention has therefore been paid to defining, understanding and managing uncertainty. Many philosophers, theologians and scientists through the ages have addressed this issue, taking a range of different approaches to the problem, and arriving at significantly different proposed responses and solutions. At one extreme is the suggestion that the universe is inherently unknowable, ineffable and ‘other’, so the search for understanding, certainty or predictability is futile. The other extreme holds that advances in human science and technology constantly reduce the scope of uncertainty, improving the ability to understand and predict the behaviour of the observed universe, and that ongoing discoveries will continue this trend.

It is neither possible nor desirable to detail here the full scope of the debate on the nature of uncertainty. It is, however, useful to distinguish two key elements which contribute to uncertainty, since these are fundamentally different, and require managing in different ways. These two aspects of uncertainty are *variability* and *ambiguity*.

- *Variability* refers to the situation when a measurable factor can take one of a range of possible values. The classic example is dice. Each die has six faces marked 1–6, and a throw always results in one side facing upwards. There is no doubt that the result will be one of the numbers 1–6, and the chance of any particular number resulting from a throw is one in six, but the precise value of the result for a given throw is not predictable in advance (assuming the die is fair and unbiased). This type of uncertainty is known as *aleatoric*, from the Latin *alea* (a game of chance using dice). The event is defined but its outcome is uncertain because it is variable.
- *Ambiguity* is defined on the other hand as uncertainty of meaning. It can be used about whether or not a particular event will happen at all, or whether something else unforeseen might occur. Here the issue is not the probability of an event producing a particular value from within a known range; instead there is uncertainty about the event itself, with lack of clarity over some aspect of its existence, content or meaning. This type of uncertainty is described as *epistemic* (from the Greek *episteme*, meaning knowledge), since there is incomplete knowledge about the situation under consideration.

Both variability and ambiguity must be recognized and actively managed if the task of predicting the future is to be attempted. These two types of uncertainty exist in all areas of life, and humans react to them in a variety of ways. Human behaviour in the presence of uncertainty is not always rational, but efforts can and should be made to understand the possible range of such behaviours so that they can be managed appropriately. This book aims to make a significant and positive contribution to creating such understanding by addressing the specific question of *risk attitudes*.

This introduces two more terms which deserve careful definition, namely *risk* and *attitude*. These are addressed in the next two sections.

WHAT IS RISK?

Risk is not the same as uncertainty, so how are the two related? The word ‘risk’ is a common and widely used part of today’s vocabulary, relating to personal circumstances (health, pensions, insurance, investments and so on), society (terrorism, economic performance, food safety and so on), and business (corporate governance, strategy, business continuity and so on). Yet, somewhat surprisingly, there is still no broad consensus on the meaning of this term. Various national and international standards and guidelines exist which mention risk, but there are many different definitions and underlying concepts in these documents. Even among risk practitioners in the various professional bodies there is an ongoing debate about the

subject matter at the heart of their discipline. And of course there is huge variation in the general literature, reflecting the lack of official agreement on the basic definition of risk.

Despite differences of detail, all definitions agree that risk has two characteristics: it is related to *uncertainty*, and it has *consequences*. Risk, however, is not the same as uncertainty, whether aleatoric variability or epistemic ambiguity. The key distinction between uncertainty and risk arises from consideration of the consequences. Perhaps the simplest definition of risk is ‘uncertainty that matters’, since uncertainty without consequence poses no risk. In this sense, risk cannot be defined unless it is related to objectives of some kind.

A more complete definition of risk would therefore be ‘an uncertainty that could affect one or more objectives’. This recognizes the fact that there are some uncertainties that do not matter in the relevant context. For example a particular child may be taking an examination tomorrow with an uncertain (variable) outcome (that is pass or fail), but this has little or no impact on anyone outside the child, the family and the school. To most people the exam result is an uncertainty that does not matter, and so it is not a risk. Uncertainty (ambiguity) about whether or not it will rain heavily in Kazakhstan tomorrow is irrelevant to the majority of businesses or individuals, so this too does not pose a risk. If, however, the child is a Kazakh and his father has promised a fishing trip as a reward for passing the exam, both uncertainties become relevant in the context, and represent risks to the desired objective of going fishing tomorrow after a successful exam result.

Linking risk with objectives makes it clear that every facet of life is risky. All types of human endeavour are undertaken in order to achieve objectives of some sort, including personal and informal objectives (for example to be happy and healthy), project objectives (including delivering on time and within budget) and corporate business objectives (such as to increase profit and market share). Since the environment within which these human endeavours are undertaken is inherently uncertain, it follows that wherever objectives are defined, there will be risks to their successful achievement.

Defining this link between risk and objectives is essential to the process of risk management, since it is a prerequisite for identifying risks, assessing their significance and determining appropriate responses. It is also, however, a crucial factor in understanding risk attitudes, since these are driven by the objectives of the individual, group or organization concerned, and the extent to which the risk ‘matters’.

Another interesting trend emerges from the definition debate when the various official published risk management standards are examined. This also arises from the

concept of risk as ‘uncertainty that matters’, since it relates to the nature of the consequence.

- Before 1997, all official published risk management standards used an exclusively negative definition of risk, with the term being synonymous with danger, hazard, loss and so on. In these definitions, risk was seen as ‘an uncertainty that could have a negative/harmful/adverse/unwelcome/bad effect on one or more objectives’, that is, risk equals threat.
- From 1997 onwards, standards publications started to appear which presented either a neutral risk definition of ‘an uncertainty that could affect one or more objectives’ (where the type of impact is undefined), or a broad definition including both downside and upside impact: ‘an uncertainty that could have a positive or negative effect on one or more objectives’. These give a definition of risk including both negative threats as well as positive opportunities.
- Since 2000 the clear majority of newly published or updated official standards relating to risk management have explicitly treated risk as including both threats and opportunities.

Although the definition debate is continuing and not all risk practitioners agree, adoption of a widened concept of risk seems to be growing. There is increasing awareness that risk management can and should be used to minimize the negative effect of downside threat-risks, while also attempting to maximize the positive effect of upside opportunity-risks, in order to optimize achievement of objectives.

For the purposes of this book, the broader definition of risk is used. This is not simply to reflect the current trend in the definition debate. It is also relevant to the subject of risk attitudes, since the *perception of risk* is a key driver of attitude to risk. Clearly people who see risk as wholly negative will have a different approach to it from those who are also aware of potential upside. The recognition of opportunities which can be proactively managed is a significant influence on risk attitude, and it can also provide a powerful motivation for attitudinal management and modification.

WHAT IS ATTITUDE?

Attitude is another word used commonly but loosely, and in a book dealing with risk attitudes it is essential that this too is clearly defined. Dictionaries offer two differing definitions. The first relates to the inner working of the human mind, where ‘attitude’ is ‘state of mind, mental view or disposition with regard to a fact or state’. A second equally valid definition describes the positioning of an object in space, such as an

aircraft, spaceship, or missile, where ‘attitude’ is said to mean ‘orientation of axes in relation to some reference plane, usually the horizontal’.

It is interesting to note that both definitions insist that attitude can only exist in relation to a datum point – either a fact towards which one holds a mental disposition, or a reference plane such as the horizon against which orientation is measured. In this respect ‘attitude’ is similar to ‘risk’, which is defined in terms of objectives.

Although at first sight mental views and aircraft positioning do not seem to have much in common, in fact the two definitions of attitude are not incompatible or unrelated. The second meaning gives the sense of attitude as describing ‘direction of lean’. This can be seen as a metaphor for the internal approach adopted by an individual or group towards a given situation, and a number of useful insights arise as corollaries of this view, with each individual or group being the pilot of their own attitudinal aircraft.

- Just as the pilot makes a decision on what attitude to adopt for the aircraft in three-dimensional space in order to position it to execute the desired manoeuvre, so an individual or group can make an attitudinal choice to lean towards a particular desired response, behaviour or outcome.
- The attitude of an aircraft does not in itself result in motion, although it is a direct influence on the direction taken. In addition to attitude some force must act on the aircraft to generate motion – analogous to motivation.
- Aircraft attitude needs to be followed by movement if it is to result in execution of a manoeuvre, and similarly individual or group attitudes must be translated into action if the desired outcome is to be achieved.
- Attitude in space can be described using a number of elements, usually termed ‘pitch’ (rotation about the axis from wing tip to wing tip), ‘roll’ (rotation about the axis from nose to tail) and ‘yaw’ (rotation about the axis from ceiling to floor). It is also possible to subdivide human attitudes into their component dimensions to enable them to be better understood and managed.
- As the number of degrees of freedom for aircraft movement is almost unlimited within the three dimensions of space, so there is a bewildering array of potential attitudes that can be chosen in any given situation.
- It is possible for extremes of attitude to make an aircraft unstable (for example stall or spin), resulting in loss of control and potentially catastrophic consequences. Similarly a sense of balance is required for individuals and groups if their attitudes are not to lead to undesired outcomes.

- Different extremes of attitude require different types of response. For example if an aircraft finds itself in a stall (resulting from a lack of laminar flow over the aircraft's wings when the angle between the aircraft's direction of motion and the direction of air flow is too high), the correct response is to do nothing, allowing the aircraft to self-correct. In the case of spin, however, (where there is a lack of laminar flow over the aircraft's wings and the aircraft is rotating about its yaw axis) emergency action is required to bring the aircraft under control. In the same way some extremes of human attitude are self-correcting where others require aggressive intervention.
- While there may be a preferred response (initial default positioning), the final outcome remains a matter of choice.

As a result of this comparison, the term 'attitude' as applied to internal human mental processes and positioning is used here to refer to *chosen responses* to situations. Some attitudes may be deeply rooted, representing core values for the individual or group, but they nevertheless represent a choice. Other attitudes may be more malleable. Attitudes differ from personal characteristics in that they are situational responses rather than natural preferences or traits, and chosen attitudes may therefore differ depending on a range of different influences. *Perception* is also a key driver of attitude, since this determines how a particular situation is seen, and hence the chosen response which is considered to be appropriate. Clearly if these influences can be identified and understood, the possibility of changing them is introduced, allowing individuals and groups to manage their attitudes proactively – which is the basis of emotional literacy.

The fact that attitudes can be modified is essential to the case for *understanding and managing risk attitudes*. If attitudes were fixed inherent attributes of individuals, inborn and unchangeable, then while it might be possible to *understand* them it would never be possible to *manage* them. The attitudes of individuals or groups would then not be comparable to an aircraft flying freely through the air, but would instead be like a cruise missile pre-programmed to strike a fixed target.

The best that could be achieved with fixed attitudes would be to react or respond to their presence. The fact that some people act as if their attitudes were indeed fixed ('It's just the way I am and I can't help it') does not change the reality that attitudes are chosen, even if the choice is made at a deep level of consciousness not evident to the individual. The first objective of *understanding* attitudes in general, and risk attitudes in particular, is necessary in order to achieve the second objective of being able to *manage* them proactively and intelligently.

The way in which individuals and groups choose or adopt attitudes in situations of uncertainty is addressed in more detail in Part 2, and options for modifying these choices using emotional literacy approaches are presented in Part 4.

RISK MANAGEMENT IN TODAY'S BUSINESS

Given its significance in facilitating achievement of objectives, the structured application of risk management in the world of business has become increasingly widespread. Risk management has become recognized as a management discipline in its own right, with a broad supporting infrastructure. Elements of this support include:

- *Academic base.* Many universities and educational establishments offer basic and advanced teaching in risk management, at degree, masters and doctoral levels, and both theoretical and applied research programmes are also available.
- *Literature.* In addition to the wide range of national and international risk management standards and guidelines, there is a number of refereed journals covering the topic, as well as a huge variety of books on various aspects of risk.
- *Process.* Over time a broad consensus has developed on the elements required for an effective risk process, including an initial planning phase to define the context, followed by risk identification, assessment and prioritization using qualitative and quantitative methods, development of appropriate responses, implementation of agreed actions, risk communication and review.
- *Professional bodies.* Many professional societies exist specifically to promote and support the discipline of risk management. Among the most prominent are the Institute of Risk Management (IRM) and the Association of Insurance and Risk Managers (AIRMIC) in the UK, the Global Association of Risk Professionals (GARP), the Public Risk Management Association (PRIMA), the Risk Management Association (RMA), the Federation of European Risk Management Associations (FERMA), the European Institute of Risk Management (EIRM) and the Society for Risk Analysis (SRA). Other professional bodies in different sectors also have specific interest groups (SIGs) covering risk management, for example the Project Management Institute (PMI), the UK Association for Project Management (APM), the International Association of Contract and Commercial Managers (IACCM), the International Council on Systems Engineering (INCOSE), the Insurance Information Institute (III), the Insurance Institute of America (IIA), the Risk Management Institution of Australasia (RMIA) and the Professional Risk Managers' International Association (PRMIA). [Website addresses for these organizations are given at the end of this chapter.]
- *Qualifications.* A range of examinations and qualifications are available for the risk professional, though there is no clear consensus on a single

certification which is recognized across all industries or countries. In addition to academic qualifications available through universities, it is now possible to become a Certified Risk Professional (see www.bai.org/CRP), a Certified Practicing Risk Manager or a Professional Risk Manager (see prmia.org/certification/cert.php), a Finance Risk Manager (see www.GARP.com/FRMexam), or an Associate in Risk Management (see www.aicpcu.org/flyers/ARM.htm), or to take examinations leading to the IRM Diploma in Risk Management or the APM Project Risk Management Certificate (also available through IRM).

- *Tools.* Software vendors offer a wide variety of tools to support all aspects of the risk process, as well as specialized tools for particular applications. There is also a growing market in enterprise risk management solutions, providing an integrated approach to managing risk across the organization. The current generation of risk tools have powerful functionality, good user interfaces and increasing integration capability.
- *Consultancies.* Solution providers also offer risk management support, allowing clients to benefit from their expertise and experience, and sharing best practice thinking and practical implementation. The growth in popularity of risk management has increased the number of consultancies offering support in this area, though purchasers of risk support services need to exercise discretion in selecting suppliers with genuine ability rather than marketing hype.

In parallel to development of a substantial infrastructure to support implementation of risk management, application of risk processes has reached ever further across the boundaries of business. Risk management is not only practised formally in most industries, in many countries, and in both government and the private sector, but it also plays an important role at all levels in organizations. The types of risk addressed in businesses include the following :

- corporate governance
- business risk
- reputation risk
- business continuity
- disaster recovery
- strategic risk
- financial/credit/treasury risk
- country risk

- political risk
- information security
- fraud risk
- market risk
- project risk
- operational risk
- technical risk
- health and safety
- environmental risk.

This breadth of application emphasizes the need for a joined-up approach to risk management which is holistic and integrated across all levels of the organization, including implementation of the risk process and its supporting infrastructure. As a result of this wide-ranging scope of risk affecting the entire business, risk management needs to be fully effective in order to meet the challenge.

IS RISK MANAGEMENT EFFECTIVE?

Efficiency describes the application of resources to inputs in order to generate outputs with minimal waste. *Effectiveness* on the other hand is not just about the ratio of input to output, but instead relates to the extent to which a measurable result is obtained. It is clear that risk management success should be determined in terms of effectiveness rather than mere efficiency, since the very purpose of risk management is to maximize achievement of objectives.

The preceding section in this chapter has shown that awareness and application of risk management has penetrated widely into the world of business, and it is now seen as a key contributor to business and project success. Risk management tools, techniques and processes are being implemented with increasing efficiency as organizations seek to reap the promised rewards of proactively addressing the effects of uncertainty on achievement of objectives.

However, despite this recognition of the role of risk management, businesses still struggle, surprises still occur, projects still fail and the future remains unpredictable. In other words, risk management as commonly implemented may be *efficient*, using the processes, tools and techniques with little wasted effort, but it is often not *effective*, not achieving the set objectives or delivering the promised benefits. This is not to say that

risk management can change the inherently uncertain nature of the future; rather that it should improve the ability of individuals and organizations to predict and manage future uncertainty. And yet experience continues to demonstrate otherwise.

Why should this be? Is it the result of some failure of risk management in principle, with a flawed concept or theory? Or perhaps the process is faulty, and is not adequate to the challenge of exposing and addressing uncertainty? Maybe staff are not being properly trained in how to apply risk management, or the tools are not up to the job?

The risk literature discusses a number of Critical Success Factors (CSFs) which have the potential to influence risk management effectiveness. The broad conclusion is that nothing is wrong with the concepts or theory, and that inadequate tools, techniques or training cannot bear the whole blame for lack of risk management effectiveness. Instead the problem lies in how risk management is actually implemented.

Most commentators agree that the most significant CSF influencing effective risk management implementation is the one most often lacking: an appropriate and mature risk culture. Research and experience both indicate that the attitude of individuals and organizations towards risk has a significant influence on whether risk management delivers what it promises. Risk management is undertaken by people, acting individually and in various groups. Each group exercises a greater or lesser degree of influence over others, with varying levels of overlap, creating complex hierarchical sets of membership and influence, as summarized in Figure 1.1.

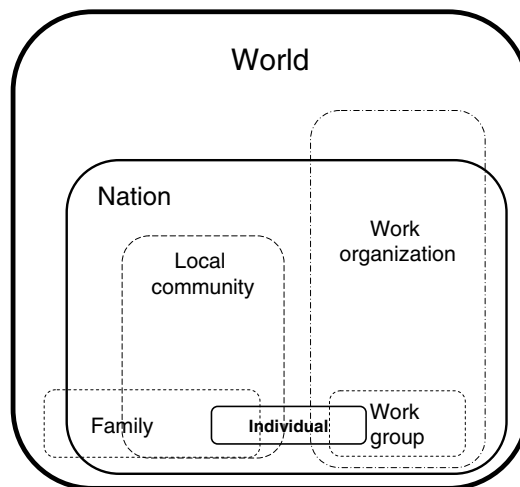


Figure 1.1 Hierarchies of membership and influence (not to scale)

The human element introduces an additional layer of complexity into the risk process, with a multitude of influences both explicit and covert. These act as sources of bias, creating preferred risk attitudes which affect every aspect of risk management. This issue is explored further in Chapter 2, where the importance of human factors in the risk process is examined in detail.

Risk attitudes exist at individual, group, corporate and national levels, and attempts can be made to assess and describe them. This allows sources of bias to be diagnosed, exposing their influence on the risk process. Diagnosis should then lead on to treatment, taking action to modify risk attitudes where the existing situation is not conducive to effective risk management.

PURPOSE AND STRUCTURE OF THIS BOOK

The human aspects of risk management are acknowledged as being critical to success, but very little has been written about what this really means in practice, or about how to manage proactively the influence of human behaviour on the risk process. A people-centred approach for risk management would address this issue and allow risk attitudes to be both understood and managed. This would provide practical guidelines allowing individuals, senior managers and risk professionals to diagnose real situations and develop strategies for good practice, as well as minimizing the impact of situations where risk attitudes may be counter-productive.

This book is designed to define and bridge this gap. Having introduced in Part 1 the current status of risk management and outlined why human factors matter, Part 2 that follows defines and details the range of possible risk attitudes, looking both at individuals and groups. This is followed in Part 3 by a review of recent advances in the field of emotional intelligence and emotional literacy, which provide a means by which attitudinal change can be promoted and managed, for both individuals and organizations.

Finally the two areas are brought together in Part 4, applying the insights of emotional literacy to the field of risk attitudes. This is presented in a practical and applied framework rather than as a theoretical or academic treatise, based on the authors' shared experiences and expertise rather than on empirical research. This combination of two leading-edge areas creates a uniquely powerful approach allowing risk attitudes to be understood and managed, and so addresses the most common shortfall in risk management implementation: failure to manage the human aspects of the risk process. The reasons why these aspects are important to risk management effectiveness are addressed in the next chapter.

Web addresses for professional bodies related to risk management:

- UK Institute of Risk Management (IRM) www.theIRM.org
- UK Association of Insurance and Risk Managers (AIRMIC) www.AIRMIC.com
- Global Association of Risk Professionals (GARP) www.GARP.com
- Public Risk Management Association (PRIMA) www.PRIMACentral.org
- Risk Management Association (RMA) www.RMAhq.org
- Federation of European Risk Management Associations (FERMA) www.ferma-asso.org
- European Institute of Risk Management (EIRM) www.EIRM.com
- Society for Risk Analysis (SRA) www.sra.org
- Project Management Institute Risk Management Specific Interest Group (PMI Risk SIG) www.RiskSIG.com
- UKAPM Risk SIG www.apm.org.uk/riskmanagement.asp
- International Association of Contract and Commercial Managers (IACCM) Risk Working Group www.IACCM.com
- International Council on Systems Engineering (INCOSE) Risk Management Working Party www.INCOSE.org/practice/techactivities/wg.risk
- Insurance Information Institute (III) www.iii.org
- Insurance Institute of America (ITA) www.aicpcu.org
- Risk Management Institution of Australasia (RMIA) www.rmia.org.au
- Professional Risk Managers' International Association (PRMIA) <http://prmia.org>