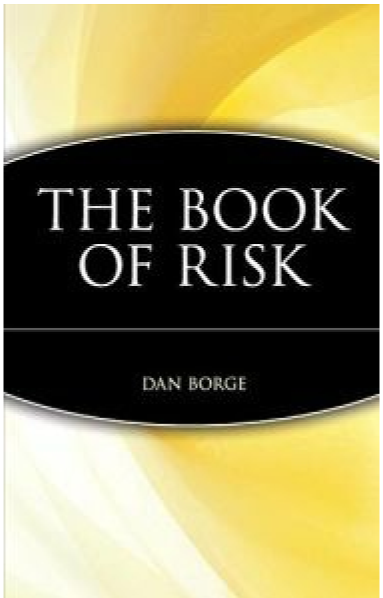

Book The Book of Risk

Dan Borge
Wiley, 2001

Recommendation

In a bureaucracy, it's taken for granted that any risk – like any flesh-eating bacteria – is a bad thing. But in a fast-paced environment in which decisions must be made in rapid-fire, risk is not only a constant, it's a primary ingredient to success. So too in your daily life, in which each decision – Do I drive to work or take the train? Do I have a cigarette or use the patch? – ultimately comes down to a weighing of risks versus potential rewards. Dan Borge takes the sophisticated risk-management theories employed by some of the world's smartest companies and boils them down to easy-to-grasp principles that can be used by any business or individual. Some books must be read carefully in order to be appreciated, and this is certainly one of them. Risk management is complex, and despite Borge's skill at getting to the heart of the matter, you'll find yourself mulling over the intricacies of each page of this finely wrought book. *BooksInShort* recommends this book to all senior executives, and to any professionals with the potential to join those ranks – provided they make the right decisions.

Take-Aways

- You are the risk manager of your own life.
- Not making a decision can be just as risky as making it.
- You can develop decision trees for any scenario, showing the possible good or bad outcomes that may result from your action.
- Risk management's purpose really isn't to minimize risk. It is to balance risk with opportunity to create the best overall value.
- The best risk managers combine information and analysis with intuition.
- The principle of leverage has caused more banks to grow insolvent than any other idea.
- Diversification is the most powerful tool for reducing financial exposure.
- Liquidity risk is the least understood and the most dangerous risk, because it can affect you at the worst time: When you need to buy or sell.
- Risk management is rising to a new level of professionalism on a par with accounting or law.
- Risk management's goal is improving future results, not explaining the past.

Summary

A Risky Business

Risk management is simply the ability to gain more power over the events that can change your life. Properly viewed, it will be your wisest counselor, whispering in your ear about when to seize the positive opportunities of life and when to pass on the dubious ones. The business of risk management boils down to two principles:

- Being aware that any endeavor carries risks.
- Knowing that if you take deliberate action, you can increase the odds of good outcomes and decrease the chance of bad outcomes.

> "Instinctive responses work best in situations that resemble the environment in which they were developed - prehistoric forests, jungles and savannas populated with small, scattered bands of people living off the land. Instinctive responses may not always work well in modern industrialized societies teeming with millions of people."

When you think about it, you're already a risk manager. Every decision you make - leaving the bed in the morning, having a cup of coffee, lighting up a cigarette or getting behind the wheel of your car - carries with it risk. Weighing risks versus benefits is just as much your personal responsibility as it is a professional one. No magic bullet exists that enables you to anticipate risk perfectly. Managing risk begins with defining the bad outcome you wish to avoid.

> "Seat-of-the-pants decision-makers are dangerous relics who are good only for fighting the last war. Failing to think clearly and logically about all the available facts is the definition of stupidity and is a terrible waste of the cognitive power of the brain."

Risk management is rapidly expanding as a prestigious professional field on par with doctors, lawyers and CPAs. Financial institutions re-evaluate their risk postures on a daily basis. Risk management also applies to medicine, engineering, seismology and other risk-averse fields.

Defining A Bad Outcome

Defining the outcome you wish to avoid is critical to the risk-management process. Obviously, though dangerous to ignore, defining all possible bad outcomes is an easy step to overlook or to take for granted, because there simply is no universal definition of a bad outcome. Is a devastating hurricane a bad outcome? To most people, yes. To someone in the home repair and remodeling business, probably not. Any given situation carries the possibility of more than one bad outcome, so be explicit about the outcomes you seek to avoid, as well as those you prefer.

> "You will have to make a decision, because even if you do nothing you are doing something. Doing nothing can mean missing valuable opportunities or allowing threats to materialize."

Ideally, when you know all the possible outcomes, you can arrive at a decision tree that tells you when the gain or benefit that you seek (your expected utility) outweighs the risk you are willing to assume in taking a particular course of action. Usually, to be practical, you must simplify your options, hopefully without overlooking any essential elements. Doing so skillfully is the key to effective risk management.

The Power of Belief

If you believed that you had a greater than 10% chance of dying in a fatal accident if you drove to work today, would you do it? It would sound like a good day to call in sick, right? You go to work each day because you believe you have an excellent chance of getting to work safely. Don't forget, however, that there is a definite chance that you are wrong in your belief. In reality, you must act on your (informed) beliefs. Deciding not to act - staying home in this case - has consequences as well. Two factors come into play when you decide whether to take a risk: your beliefs about the likely possible outcomes and your preferences for the payoffs that would result as compared to the potential loss. A person dying of thirst in the desert, for example, would probably not offer to bet a glass of water against $1 million on a coin flip. In that circumstance, the preference is for the water. Because preferences are inherently subjective, you have every reason to be suspicious of experts who push one-size-fits-all solutions. You have to act on your own beliefs in making your decision. But is it smart to follow only your beliefs, without properly analyzing the situation?

Intuition Versus Analysis

This is where right-brained and left-brained types don armor and do battle. Is it smarter to follow your intuition or to be scientific? Relying on scientific information means overlooking everything that you should know, but don't. Usually there is a lot you don't know. The purely rational approach overlooks the power of the unconscious mind to form an intuition that will guide you to the right choice. On the other hand, if you ignore the rigors of analysis, then you risk a sloppy or even irrational decision-making process. To be a good risk manager today, you must have analytical models - however, if you only rely on analytical models, you cannot be a risk manager at all.

Volatility

Volatility is an important factor to consider in analyzing your risk. A situation with a wide number of possible outcomes has greater volatility than a situation with a narrow range of possible outcomes. You can measure volatility as the difference between two different outcomes, one desired and the other feared. Assessing the volatility of a situation forces you to ask, "Volatility of what?" If you can answer by defining the downside you want to avoid - and that isn't always as easy as you think - you have taken a great leap forward toward quantifying the degree of risk you face.

Fundamental Strategies

Making a decision based on risk management involves using one or more of these strategies:

- Identifying - Before you can avoid a risk, you must first determine what it is. Because each field and circumstance has its own unique and often subtle risks, you should borrow from the experience of your predecessors and use the lessons learned by others. Talk with the experts in whatever discipline may be involved.
- Quantifying - Try to put the situation into numbers, even if it doesn't seem to fit. Doing so will clarify your thinking about the problem. What is the potential gain? Can you quantify the potential loss? Can you define your utility curve - those tradeoffs where you would be willing to accept X amount of risk in return for Y.
- Preventing - Once you understand the risk, do whatever you can to prevent it altogether. Check your brakes before you take that trip through the Rocky Mountains.
- Creating - While you do not want most risks, consider that you may wish to create desirable risks. Desirable risks are inherently embedded in the attractive opportunities you wish to pursue. Life usually does not give you the chance to gain without risk.
- Buying and selling - Sometimes you can sell your risk (and if you cannot create a desired risk, you may be able to buy it). If you are worried about your neighborhood being flooded, you may be able to sell the house to someone else. If you want to ski down a mountain face, you can purchase a tour - essentially buying a risk to get an opportunity.
- Diversifying - Diversification, a very powerful way to manage risk, has been practiced for centuries. To have more eggs in the long run, don't put all your eggs in one basket.
- Concentrating - An alternative approach to diversification is to concentrate risk. If you put all your eggs in one basket, you can concentrate carefully on taking care of your single basket, rather than worrying about several. This assumes, however, that you have a personal opportunity to influence the likelihood of good outcomes.
- Hedging - Hedging is when you take on a new risk that partially or completely offsets the old risk. If two teams are playing a game, and you make an even-money bet for exactly the same amount on both teams to win, you have successfully hedged your bet. (Also notice that this perfect-hedge case means that with your no-risk posture comes no possibility of gain!) Many make the mistake of thinking that when you hedge a risk, the risk is gone. Unless the hedge is perfect, that is definitely not the case.
- Leveraging - When you leverage your risk, you magnify all the possible outcomes, both good and bad. You commonly see leveraging in the equity markets, when people buy on margin. Or you can simply borrow money to buy a risky asset. The leveraged strategy offers a much higher upside, but also a much higher downside. You must carefully weigh both aspects. One

reason people leverage is that their companies are structured so that they have limited liability - so their downside is limited to their original investment.
- Insuring - Every day, mountains of cash are transferred from those who don't want risk to those who think they can manage it at a profit. This is called insurance. Insurance companies can handle the risk that others want to get rid of because they can diversify.

Obstacles to Rational Decision Making

Like most people, you face barriers to rational decision-making. Among them are overconfidence, optimism, faulty hindsight and the tendency to see patterns where none exist. You might also overcompensate to reduce one risk and thereby assuming another, or fall prey to the myopia of looking only at recent events to determine future events. Avoid inertia, complacency and zealotry in making decisions. Inertia is the tendency not to act when faced with choices, complacency is the tendency to be too comfortable with familiar risks and zealotry is seeing only one possible vision of the future. Actually, the opposites of some of these traits - under-confidence, undue pessimism, etc. - may also cloud your view of risky situations.

The Risk-Taking CEO

CEOs have two duties: making business decisions and making financial decisions. In finance, risk is measured by value at risk (VAR). This is the potential loss of monetary value that you might suffer during a specific period. If, for example, you invest $1 million, and you estimate that your maximum exposure over a one-year period is 20%, then your VAR is $200,000 for the year. VAR enables you to quantify financial risk. While VAR can oversimplify the risk in any given situation, it continues to be a valuable measure of financial risk. The five types of risk that affect company finances are:

- Interest-rate risk - Uncertainty about how fluctuating yields on bonds and loans will affect the value of loans or bonds available in the market.
- Currency risk - Uncertainty about the value of foreign assets based on currency fluctuation.
- Credit risk - Uncertainty about the ability of someone to pay debts that are owed.
- Commodity risk - Uncertainty about the fluctuating value of standard products.
- Equity risk - Uncertainty about the value of ownership in other companies or property.
- Operating risk - Uncertainty about losses due to mistake, accident, theft, technological disruptions, market changes or natural disaster.
- Liquidity risk - Uncertainty about being able to sell assets quickly at fair market value.

Risk Management in Daily Life

You can apply the principles of risk management to your personal life, particularly when making financial decisions like picking stock-market investments or deciding how to pay for additional insurance coverage. Financial planners, for example, use simulations to determine how different investment portfolios will play out under different market conditions.

> "Someone who was risk averse would not play a game that offered an equal chance of winning $50,000 and losing $50,000, since the satisfaction of winning would be much less than the pain of losing."

In our era, it is more necessary than ever to protect yourself from risk. Deregulation has thrust many businesses into a more competitive arena, where you have to take chances - albeit calculated ones - in order to thrive. The safety net once promised to individuals is no longer reliable, and many in the United States no longer count on Social Security to provide an adequate income in old age. The social contract between the worker and the employer has changed. You dare not respond to these dangers by becoming too cautious, for that path can be riskier still. The real goal of risk management isn't to eliminate risk or even to minimize it, but rather to achieve the best balance of risk versus opportunity. An opportunity is often found within every threat, and a properly balanced approach to managing risks can help you take advantage of the opportunities that await you.

About the Author

Dan Borge, Ph.D., worked for Bankers Trust for 20 years and was the architect of the renowned RAROC risk-management system. Borge was a managing director and partner. Previously, he was an aeronautical engineer who designed airplanes at Boeing. He earned his doctorate in finance from Harvard Business School.