CONNECTIONS THAT NOBODY SEES

The prices of oil and houses are related, history teaches us. Scenarios can reveal such unexpected connections and limit uncertainty.

BY PAUL DE RUIJTER

After the start of the financial crisis problems on the US housing market turned out to influence the creditworthiness of European banks and (subsequently) the rent that Euro countries pay. In classic risk management this scenario was consistently ignored. After all, if there is a ten percent chance that customers do not pay, ten percent that a loan is not refinanced and ten percent that interest rates rise sharply, the operational risk manager commonly says the probability for these three to occur simultaneously is one in a thousand (10% x 10% x 10%). But in strategic matters risks more and more turn out to be interconnected and that number work no longer adds up.

Operation risk management works perfectly for calculating internal, common, business-related risks. Sickness absences, debtors that do not pay, and defect machinery are problems that occur with regularity.

Operational risk management has three underlying assumptions that apply to these kinds of problems. The first is the law of the large numbers: an event has occurred often enough in the past to provide a basis for predictions about the future.

For example a bank can make a well-founded estimate based on statistics of the chance that a client will not pay off his mortgage. The second assumption is ceteris paribus: the other circumstances remaining unchanged. The third assumption is the independence of events. The number of defaulters does not change the chance that loans cannot be refinanced.

Uncertainty

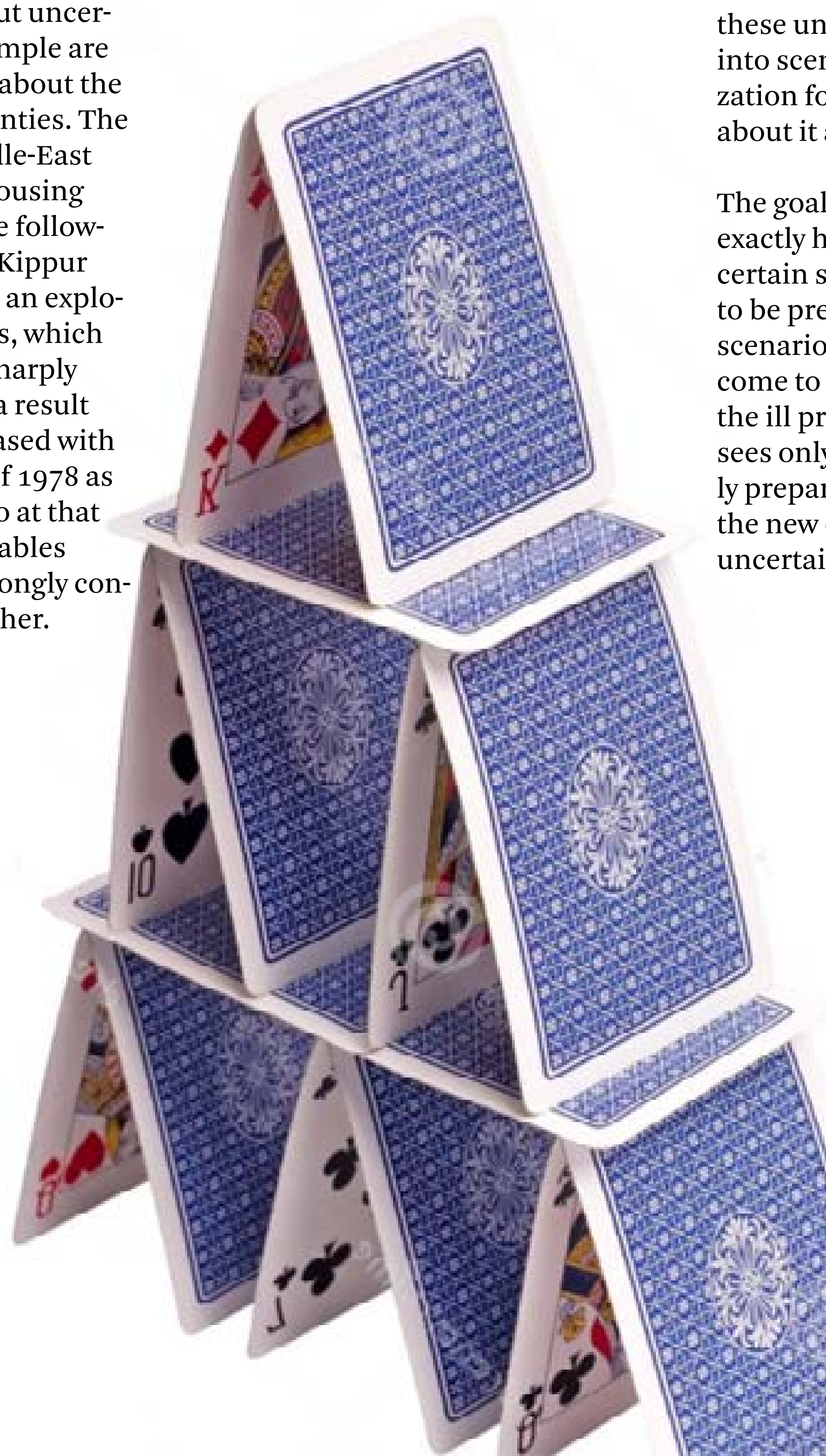
However, the past years it has turned out that these three assumptions do not hold true for issues of a strategic nature. There are rare, but very far-reaching events for which there is too little statistic data to say something with certainty about the future certainty based on the past.

In addition, there is increasingly often a matter of ceteris non paribus: the remaining (political, technological, economic) circumstances have changed completely.

Finally, the statistical independence does not hold true; events turn out to actually be interconnected. There are no singular risks; we are dealing with uncertainty.

Explosion

Organizations such as Shell, Rabobank and the Dutch Ministry of Defense use scenarios to think about uncertainty. A classic example are the Shell scenarios about the oil crisis in the seventies. The conflict in the Middle-East finally lead to the housing crisis of 1978. In the following order: the Yom Kippur War of 1973 caused an explosion of the oil prices, which then resulted in a sharply rising inflation. As a result interest rates increased with the housing crisis of 1978 as a consequence. Also at that time economic variables turned out to be strongly connected with each other.



Scenarios adequately prepare many organizations for uncertainty. It is a practical way to explore the connection between events. What could happen if interest rates suddenly go up quickly, the American housing market gets hit again and the euro nose dives? By incorporating these uncertain variables into scenarios, an organization forces itself to think about it ahead of time.

The goal is not to determine exactly how likely it is for a certain scenario to occur, but to be prepared in case this scenario unforeseen does come to pass. Because where the ill prepared organization sees only risks, the adequately prepared eye also sees the new opportunities that uncertainty offers.

Rising costs

One of the biggest challenges of this time are the continuously increasing health care costs. A problem that makes politicians' hair go grey. Nobody knows where it will end. Nevertheless there are also opportunities in this. And not for the surgeon who only operates to increase returns.

Increasing costs and an impending lack of qualified personnel can also be a source of innovation. Entrepreneurs that develop tools or concepts to make healthcare more efficient, can – paradoxically – earn money by bringing down healthcare costs. Prerequisite is that politics and healthcare are prepared to listen to innovative parties from outside the sector.

Not every uncertainty is a business model in disguise, but looking at uncertainty in one way or another, can help strategic risk management to recognize opportunities where others just see risks.

Paul de Ruijter is an investor, entrepreneur, and consultant about scenarios for the financial sector among other things. Recently the English version of his strategy handbook came out: Scenario Based Strategy - Navigate the Future

THE VISION AND STATISTICS

We have to prevent that in ten years we will be speaking about the missed opportunities of 2012. A crisis also offers prospects.

BY PAUL DE RUIJTER

In the seventies, Digital Equipment (DEC) was a large manufacturer of mainframes; immense business computers that had the same computational power as a mobile phone does today. From the paradigm in which computers are large and extremely expensive, there was no market for personal computers. The then CEO Ken Olsen shared that opinion, as shows his now famous statement from 1977: ‘There is no reason for an individual to have a computer in his home.’

Empirically he was right: in the preceding thirty years there was never sold a computer for home use. No actuary would at the time have attributed a high probability to a breakthrough of the pc. Forward-looking minds such as Steve Jobs by contrast foresaw two trends that the people of the DEC did not see: computers will be smaller and cheaper. They anticipated that paradigm shift. The rest is history.

Tsunami

These kinds of mistakes are still made on a daily basis, sometimes with enormous effects. Think of the designers of the nuclear reactor in Fukushima. They assumed that the chance of a simultaneous earthquake and tsunami was practically zero. After all it had never happened before. And if you multiply two low probabilities, you get a very low probability.

The same error in reasoning was the foundation for the financial crisis. In 2007 bonds with mortgages of American families still got AAA-status as expected. After all, housing prices had not decreased in the past ten years, so statistically there was no risk. The fact that interest rates and unemployment went up, was neglected as long as the bonds were being traded lively. Just as the risk that AAA-bonds were not just made up of AAA-mortgages, but that the banks that created them also layered in many bad mortgages. Thus a safe investment suddenly turned out to be extremely risky.

Statistics from the past can have a dazzling effect. Currently power plants are still being seen by many as secure investments. All data seem to confirm this. There is enough coal, the demand for energy is increasing, and the exploitation has always been profitable. Investment in renewable energy is however often seen as risky. We have little data about renewable energy and its costs are currently still high.

Post-fossil

There are also investors that do not let statistics mislead them. We have a big CO_2-problem and one day the post-fossil era will dawn. The technological development of renewable energy is increasing rapidly. In the meantime more has been invested in renewable energy than in fossil-powered plants. Those who are too early and too visionary run risks. But those who stick too long as well!

By seeing the uncertainties of the present only as risks, we run the risk that in ten years we will be talking about the missed opportunities of 2012. In good times risks are underestimated. In times of crisis this happens with the opportunities that uncertainty offers.

High interest rates and unemployment in Southern Europe, the ageing population, low returns for pension funds, and scarcity of resources, and an increasingly active environmental movement: they are the current risks in which the opportunities can be found.

Fukushima: the chance of a simultaneous earthquake and tsunami seemed negligible.

Dazzling: many still see power plants as a safe investments. All data from the past seem to confirm this.

‘THERE IS NO REASON FOR AN INDIVIDUAL TO HAVE A COMPUTER’

AAA

Housing prices had not decreased in the ten years before 2007. So what was the risk?

Risks as opportunities

Three contemporary examples

Risks
High interest rates, low returns for pension funds, and unemployment in Southern Europe.

Opportunities
Taking over of manufacturing companies in Southern Europe, inexpensively financed in the north, manufactured cheap in the South.

Risks
Ageing population, low returns for pension funds and lack of personnel in the Netherlands.

Opportunities
Specialized employment agencies that anticipate structural discrepancies on the European employment market

Risks
Resource scarcity and an active enviroment movement

Opportunities
Development of new companies in the area of redesign, reuse and recycling.

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