

Why institutions failed to manage their risk

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ANY OBJECTIVE ANALYSIS OF THE FINANCIAL CRISIS OVER THE PAST THREE YEARS MUST CONCLUDE THAT THERE WAS PLENTY OF BLAME TO GO AROUND. CLEARLY SOME OF THIS BLAME MUST BE SHARED BY RISK MANAGEMENT SPECIALISTS, BUT THE FAILURE WAS LARGER THAN THAT. PROPER MANAGEMENT OF RISK REQUIRES A BROAD INSTITUTIONAL PROCESS IN WHICH BUSINESS MANAGERS, TRADERS, ORIGINATORS AND SENIOR MANAGEMENT ARE ACTIVELY ENGAGED.

A fatal blind spot

In my view the central failure of financial risk management, as developed in the past 25 years, has been to neglect the important distinction between 'risk' and 'uncertainty' that Frank Knight enunciated in his 1921 book *Risk, Uncertainty and Profit*. Knight defines 'risk' as randomness that can be analysed using a distributional framework and 'uncertainty' as randomness that cannot be so analysed. Situations in the 'risk' domain are characterised by repeated realisations of random events generated by a process that exhibits stochastic stability or, at least, a high degree of stochastic inertia. In layman's terms, this means that the nature of the randomness changes only slowly over time. Risk, in this sense, was the basic subject of Peter Bernstein's well known book *Against the Gods: The remarkable story of risk*. It is not surprising that The Economist's review of what went wrong with risk management during the crisis was titled *The Gods Strike Back*.

A great deal of criticism has been levelled at the use of value-at-risk (VaR) as a risk measurement tool. In truth, experienced risk managers who were active in the early nineties realise that VaR was the first reasonably effective means for communicating risk implications between traders and general managers. Nevertheless, financial risk managers

must bear some responsibility for the ensuing criticism that VaR created a false sense of security among senior managers and watchdogs. For far too long, many were prepared to use the sloppy shorthand of calling VaR the 'worst case loss'. A far better alternate shorthand description is to call VaR 'the minimum twice-a-year loss'. This terminology conveys two things. It indicates the approximate rarity of the stated loss threshold being breached and it begs the right question, namely 'How big could the loss be on those two days a year?'



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To put it bluntly, VaR says **nothing** about what lurks beyond the 1% threshold.

In contrast to 'risk', 'uncertainty' is characterised by rare and non-recurring events. In the social scientific space, such events are typically dependent on the infuriatingly mercurial influence of human emotion. Shifts in mass psychology are often sudden and unexpected, more akin to the shift in tectonic plates during an earthquake than to daily fluctuations in market prices. It is highly problematic to apply the statistical apparatus we use for daily risk measurement to such non-recurring events. Tinkering with the details of distributional techniques such as VaR may improve the performance of our value-at-risk models when we back-test them, but this **will not help us act effectively to avoid a crisis**. We must *never* lose sight of the irreducible core of unpredictable uncertainty that defies classic statistical analysis.

What is to be done?

Improving the future effectiveness of financial risk management will not be easy. This is primarily because it requires more than a few narrow technical adjustments. Most importantly, successful **improvement will require some difficult cultural changes**. Uncertainty must receive much greater attention and a larger share of the resources devoted to risk management. What most organisations will find to be most difficult, however, is that a process for effective assessment of uncertainty is not only more holistic but also much softer, more amorphous and less easily defined than what risk managers do currently. Such a process will require dealing with more unstructured information that is not amenable to precise quantification. Inputs from country risk officers, industry analysts and macroeconomists must be integrated into regular deliberations about risk. The success of such a process will also require senior managers to abandon the comfortable idea that risk can be reduced to a single summary statistic like VaR. Executives and board members must be willing to devote the time and energy to grapple with risk in all its messy multi-dimensionality if their organisation is to have a reasonable chance to avoid the worst effects of the next crisis.

Let there be no mistake; **there will be a next crisis**. I firmly believe that crises are an inherent part of a dynamic economic environment that is fraught with unavoidable uncertainty. In a fundamental sense, periodic crises are the price we humans pay for a dynamic growing economy driven by innovation. What we will never be able to do is foresee the timing of when a sudden break will occur. We may, however, be able to protect our institutions from the worst consequences if we analyse in advance how such a crisis could unfold, what would be the first signs and what secondary and tertiary consequences would ensue.

While far from an exhaustive list, here are some other ideas about what to keep in mind if risk managers are to do a better job in the future:

- Retain a healthy scepticism about statistical results, always remembering that they are suggestive rather than definitive. In particular, always remember to examine the available data used in any analysis. Information can never rise higher than its source, and that source is the data.
- Use structural imagination to ask difficult questions. Recognise that the questions an organisation finds hard to confront are usually the ones most in need of attention.
- Respect the power of reinforcing feedback loops. Crises are characterised by multiple pre-existing vulnerabilities that don't become apparent until things start to go wrong. Once a crisis begins, however, a loss in one place can exploit vulnerabilities elsewhere in a cascading sequence involving loose cause and effect.
- Be wary of excessive complexity because it breeds opacity. In the extreme, this hampers the normally self-correcting behaviour of markets and allows the steady build-up of hidden vulnerabilities that I refer to as 'dark risk'. It is such vulnerabilities that are the precondition for a systemic crisis.

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