

Risk management flaws: when it rains, it pours

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Crises are devastating. Clear evidence can be seen from the sub-prime crisis, which left us unemployment, poverty and the collapse of financial systems. But this is half the truth. The other half says that crises, to some extent, have merit. They provide a natural worst-case scenario to discover flaws and limitations.

Past financial crises left risk managers with an interesting question: Why were the financial systems inadequately protected?

The simple answer is that people generally underestimate the likelihood of rare events, although unintentionally so. To be more specific, modern risk management tools do not have the capability to envisage a very rare event whereby markets stop functioning, credit becomes unavailable and liquidity suddenly disappears.

This gives rise to the running financial joke that a once-in-a-century event occurs every few years.

By and large, the techniques used to estimate the probability of portfolio losses and impairment have been grounded on historical price trends and volatility. Accuracy is therefore limited to the accuracy of the underlying assumptions.

Complex models sometimes give a false sense of security, hiding evidence that the entire range of outcomes may actually hinge on only two or three assumptions. It is simply not enough to see that, by the end of the day, the risks measured are still in the comfort zone.

To further illustrate this point, Nassim Taleb presented the clever story of a turkey being raised on a farm in his book, "The Black Swan".

Every day of its life, when the turkey saw the farmer, it got fed. Based on this experience, the turkey saw no reason for concern when the farmer came out the day before Thanksgiving. This very big mistake of the turkey was driven by the fact that its prior experience did not include Thanksgiving, the turkey's extreme event.

Practically, the risk management process comprises two key elements - measurement and management.

The more important of the two is how to manage the risk being measured. Although risk management models fared very poorly during the financial crisis, that does not mean that traditional approaches to risk measurement should be abandoned right away. What risk managers should bear in mind are the limits of the data being used and acknowledge these underlying uncertainties.

We may find it more beneficial to downplay the role of advanced mathematical tools in our analysis. More attention should be placed on scenario analysis and stress testing - true tools to uncover what exact risks are in the portfolio and lead to the implementation of protective measures in advance. Then discuss whether we are comfortable with the existing risks, and if not, how we can take steps to manage or mitigate them.

In summary, judgment and experience are still the most valued competencies in risk managers. It is clearly evident that quantitative techniques are not an oracle, and not even close to it. They have a very powerful ability to quantify uncertainties into one single number but still lack the vision to shed light on the path to expected security.

With the supplement of human experience and scrutinised analysis, risk managers may be somewhat more ready to weather the next perfect storm.

(The views expressed are the author's own.)

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