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Tools Work Great, Until they Don't

As someone active in the risk management field it often seems like I am barraged with vendors selling tools that will quantitatively manage risk. Some profess to be THE only tool I will need to be successful in the future. I have yet to see one guarantee that it will pay the losses that weren't predicted.

Many of these tools are useful, but none overcomes the need to use some common sense along the way. One form of concentration risk is to focus in on a single metric. The bankers have fallen for this risk with the various Basel accords (Value at Risk) and now are trying to double down by saying that all international banks should use the same capital requirement rules. Here is how I expect that to play out. Some asset class or product will be undercapitalized in the model and banks will flock to it since they don't have to hold capital. The salesmen will figure that one out. The home office and regulators will realize it only when it blows up. That's how it always plays out.

Some of the best tools are the simplest. When you itemize the risks identified, categorize and prioritize them, there are elements of qualitative and quantitative analysis. You are asked to think, and this is about as useful a risk management tool as there is. Take the metric Value at Risk (VaR). This tool sorts all the results of your stochastic analysis from best to worst and then focuses in on the 95th percentile result. This means that 5% of the results are worse and 95% of the results are better. This probably works okay if the entity being tested does not know this and the results follow a Gaussian distribution. Instead, banks holding capital at the 95th percentile VaR design their products and hedging strategies in ways that load up on really bad results past the 95th percentile or on risks that are just short of the 95th percentile. A better tool would be to keep the sorted results and graph them. Lumpy results or extreme scenarios would be obvious. What happens instead is that the board receives a single number for capital that takes on a life of its own. It's amazing to me how much information is thrown away that could be retained by sharing a simple graph. CTE (continuous tail expectation) is better in that it looks at all of the scenarios beyond the 95th percentile and averages them, but is still susceptible to the modeler who knows how to manipulate the numbers. Much as a hacker is often hired to protect a computer system, hiring a good modeler to peer review your models can be well rewarded and give you peace of mind.

Other tools will predict the next risk you are susceptible to. This might be worthwhile but will probably miss the real risk as they are built from historical data. The last risk has been addressed by the internal processes and the regulators, but the next risk is usually put off until it actually happens. Regulators are known for being a lagging indicator of reality, always reacting to the last crisis and increasing regulation right after the problems

occurred, then relaxing them to form the next bubble and crisis. Regulators are leading indicators in that regard, and not in a good way.

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