

Viewpoint: Don't Blame Crisis on Risk Models

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In September a House subcommittee conducted a hearing on risk modeling and its role in the financial crisis. The testimony of several witnesses at the hearing pointed to risk models, particularly value-at-risk models, as playing a key role in the economic meltdown.

Blame for the financial crisis cannot legitimately be laid on the doorstep of the risk models. Models are designed to reflect reality and prepare us for anticipated future states of reality. Risk cannot be fully represented if the analysis fails to include all the risky positions.

It's not a model problem that no major financial institution, regulator or legislator anticipated a future state in which house prices would drop 20%-70% and credit card default rates would hit 13%, all within 18 to 24 months. Given the correct assumptions, many risk models could simulate the world in that particular future state and thereby forecast a high rate of capital depletion.

We need to remember that risk models are used not only for day-to-day risk management, but also for regulatory purposes. In principle, regulators set the characteristics and parameters for risk models used for regulatory purposes. Risk managers adapt different parameters and/or model characteristics to better address their institution's needs and trading/investment strategies for day-to-day risk management activities. Consequently, regulatory models and risk management models may generate significantly different results and, therefore, have varying degrees of effectiveness in identifying significant risks.

Risk models have strengths and weaknesses. It is important not to rely on a single risk measure and to have experienced risk managers assess the reasonableness of the results before they are submitted to senior management. For example, VAR models are not good at measuring crisis risks. Understanding this characteristic and then supplementing VAR with stress tests and scenario analyses to better assess crisis risks is the full-time job of many risk managers, bankers, independent analysts and regulators.

Blaming a VAR model for causing the crisis demonstrates an imperfect understanding of the nature of the model and how it's meant to be used.

Additionally, risk modeling can benefit from extensive market data availability. Investment banks were collecting, storing and making available this data as part of their trading and sales activities. Now that some key banks have closed or merged into other entities, while others have been forced to slash costs, regulators, research foundations and universities must step in to fill the gap until new players enter the field.

On Dec. 5 we sent a comment letter [<http://www.rmahq.org/RMA/MarketRisk/>] to Rep. [Brad Miller](#), chairman, and Rep. [Paul Broun](#), ranking member, of the House Committee on Science and Technology that expressed these views and also addressed in detail:

- How the models handled the tasks for which they were designed.
- If they were used in ways for which they were not designed.
- Limitations or flaws in model design from the view point of risk management.
- The degree of faith placed in the models by various groups within financial institutions.
- How incentive structures influence the use of models or risk managers' ability to do their job.
- How the information derived from models complements or conflicts with judgment based on individuals' experiences.

We concluded risk models cannot legitimately be blamed for the crisis. In reality, long-standing government policies, the regulatory framework, financial market structure and profit sharing/incentive structures were some of the leading causes of the crisis.

As legislators, regulators and bank managers address these weaknesses, risk models should be employed to help determine the effectiveness of any proposed policies, regulations or incentive plans.

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