

Identifying and Mitigating Model Risks during Model Development

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Abstract

Model Risk has always been inherent in models used to make and inform decisions within banks. However banks models and decisions have become ever more sophisticated and complex across wider ranging areas (and clearly not confined to retail credit risk where many of the techniques were born). With the increased number and use of models, the associated risks (or unintended consequences) have increased with the risks to banks and their customers being real and material. To address Model Risk, more regulators around the world are acting. The Bank of England has published the consultative paper CP6/22 and the Central Bank of UAE recently issued their Model Management Standards (MMS) and Model Management Guidelines (MMG) for all UAE banks.

In this talk we will look at a number of areas within the development of a standard credit risk model where risks can exist within the whole modelling system, for example through data processing, modelling methodology choice, or project structure and process flow from model design through to model validation and deployment. Then we will introduce possible risk mitigants in terms of the use of specialised software tools. These tools can help by guiding the modelling analyst through the process and generating an audit trail that makes it easier to build and document models, explain key modelling actions and decisions, and make the process of model hand-over to independent validation teams far less onerous (freeing modelling resource to do more modelling.). Tools that provide documentation, visualisation, explainability, auditability, and validation during the modelling process, enable stakeholders to understand models better. By understanding why a model is making certain predictions, why model development decisions were made and how the data was used, increase trust and confidence in the model's accuracy, use and effectiveness.

The talk is therefore split into two parts, risk identification in the modelling process and mitigation of those risks through a structured and specialised modelling process.