

Title:

Model Risk Cultures

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Abstract:

Model risk can be understood as the risk to a decision maker arising from specific ways of (not) using a quantitative model. Model risks range from basing decisions on flawed calculations, to impacts on perception, behaviour and accountability. Building on anthropological theories of risk, we stipulate that there are four distinct perceptions of models and their legitimate use. Each such perception is justified by, but also generates, concern for a different type of uncertainty. Furthermore, each distinct way of perceiving and (not) using models, when deployed on its own, generates a different sort of model risk. This argument has normative implications. First, it highlights the required pluralism of stakeholders involved in model governance and validation. Second, it expands the space of legitimate challenges to quantitative models from a purely technical critique, in order to also reflect operational and commercial criteria. In particular, legitimising the concerns of a wide variety of stakeholders creates transparency about models' strengths and limitations, improving accountability and risk management. The authors acknowledge the feedback and contribution of the Model Risk Working Part of the Institute and Faculty of Actuaries.

Keywords:

Model Risk, Model Uncertainty, Risk Culture, Cultural Theory, Solvency II