The Risk Map:
A New Tool for Validating Risk Models

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Abstract

This paper presents a new method to validate risk models: the *Risk Map*. This method jointly accounts for the number and the magnitude of extreme losses and graphically summarizes all information about the performance of a risk model. It relies on the concept of a *super exception*, which is defined as a situation in which the loss exceeds both the standard Value-at-Risk (VaR) and a VaR defined at an extremely low coverage probability. We then formally test whether the sequences of exceptions and super exceptions are rejected by standard model validation tests. We show that the Risk Map can be used to validate market, credit, operational, or systemic risk estimates (VaR, stressed VaR, expected shortfall, and CoVaR) or to assess the performance of the margin system of a clearing house.

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