

DISCUSSION ON “ELICITABILITY AND BACKTESTING: PERSPECTIVES FOR BANKING REGULATION”

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1. Introduction. [Nolde and Ziegel \(2017\)](#) (NZ throughout) aim at evaluating the performance of risk forecasts. First, NZ focused on the traditional backtest, that is, backtesting whether a series of reported risk forecasts, usually obtained from one risk model, are valid. Second, NZ proposed the comparative test, that is, to compare the performance of two series of risk forecasts obtained from two different models. The main ideas behind constructing the traditional backtest and the comparative test are the concepts *identifiability* and *elicitability*, respectively.

The general perception that elicibility is equivalent to backtestability generated a serious concern for the regulators in practice. I have personally been consulted by regulatory policymakers about whether the nonelicitable expected shortfall (ES) would cause a problem for backtesting. Fortunately, [Acerbi and Szekely \(2014\)](#) calmed down such a concern by demonstrating that ES can be backtested. They claimed that elicibility is almost irrelevant for backtesting or, more precisely, model validation. Instead, elicibility is only relevant for model selection. NZ followed exactly this line of argument to construct the comparative test based on elicibility.

This discussion will, however, focus on the first issue: traditional backtest and identifiability. As stated in Section 2 in NZ, “*In fact, for $k = 1$, identifiability implies elicibility under some additional assumptions.*” This means, for a single risk measure, if one intends to establish a traditional backtest as in NZ, the risk measure must be identifiable and consequently elicitable. Ironically, this brings back the elicibility concern, which somehow contradicts the statement in [Acerbi and Szekely \(2014\)](#).

This discussion aims to reconcile such a debate and fairly evaluate the role of identifiability in the traditional backtest. In Section 2, I will start from a regulator’s perspective and discuss how to define “traditional backtestability.” Then I will argue that identifiability is, to a certain extent, necessary for backtestability if no common property across the conditional distributions of future losses is assumed. However, with assuming some common properties across the conditional distributions of future losses, identifiability is not a necessary condition for a risk measure to be backtested. This will be discussed in Section 3. Section 4 concludes this discussion.

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