Banco de la República | Colombia
Somos el banco central de Colombia

On Forecast Evaluation

Working Paper No. 825 Keep in mind
The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHORS AND/OR EDITORS Martinez-Rivera, Wilmer Osvaldo Hernández-Bejarano, Manuel Darío Julio-Román, Juan Manuel
We propose to assess the performance of k forecast procedures by exploring the distributions of forecast errors and error losses. We argue that non systematic forecast errors minimize when their distributions are symmetric and unimodal, and that forecast accuracy should be assessed through stochastic loss order rather than expected loss order, which is the way it is customarily performed in previous work. Moreover, since forecast performance evaluation can be understood as a one way analysis of variance, we propose to explore loss distributions under two circumstances; when a strict (but unknown) joint stochastic order exists among the losses of all forecast alternatives, and when such order happens among subsets of alternative procedures. In spite of the fact that loss stochastic order is stronger than loss moment order, our proposals are at least as powerful as competing tests, and are robust to the correlation, autocorrelation and heteroskedasticity settings they consider. In addition, since our proposals do not require samples of the same size, their scope is also wider, and provided that they test the whole loss distribution instead of just loss moments, they can also be used to study forecast distributions as well. We illustrate the usefulness of our proposals by evaluating a set of real world forecasts.

First Draft for comments, please do not circulate.

Fuente: https://d1b4gd4m8561gs.cloudfront.net/en/borrador-825