

# Forecast Uncertainty, Disagreement, and Linear Pools of Density Forecasts

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## **Abstract:**

In many empirical examples, combining several density forecasts is superior to selecting one of them. The linear pool (LP) is by far the most popular combination formula. We consider a mean-variance framework in order to analyze whether the LP's assumptions about forecast uncertainty are justifiable. Our theoretical results suggest that a well-known 'disagreement' term may contribute to the underconfidence of the LP, and typically has little predictive content for realized measures of forecast uncertainty. These findings motivate a simple fix - the centered linear pool - which removes the disagreement term. We illustrate these ideas via combinations of stochastic volatility models for macroeconomic time series.