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Title: Do the pre-Covid long-term relationships improve forecasts over the pandemic?

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Abstract

The aim of this research is two-fold. First, we check whether and how taking into account long-term relationships in conditionally heteroscedastic VAR models affect their predictive performance before and during the Covid-19 pandemic. Second, we examine how this performance hinges on updating of the posterior distribution upon the arrival of new observations, and whether in the advent of Covid-prompted economic turmoil, the predictions can actually benefit from ceasing to update the posterior at some point.

Empirical analysis is based on the so-called small model of monetary policy, considered separately for five different economies: the United States, the United Kingdom, the Euro Area, Poland and Hungary. The heteroscedasticity is captured by means of hybrid specifications combining stochastic volatility and GARCH (SV-GARCH), or some special cases thereof. Estimation and prediction are performed within the Bayesian approach, with the focus on evaluation and comparison of the models' forecasting performance by predictive likelihood.

The results indicate that while accounting for long-term relationships in conditionally heteroscedastic VEC models enhances their predictive performance prior to the Covid-19 outbreak, it may actually be counterproductive for times of economic crisis. Additionally, refraining from keeping the posterior updated does improve the predictions, but only for the US economy during the pandemic.