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PRESS RELEASE

Short-term forecasting of GDP using large monthly datasets - A pseudo real-time forecast evaluation exercise

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This Working Paper, which is also published in the ECB Occasional Working Paper series, reports the results found by the team on short-term forecasting, a temporary working group consisting of representatives of various euro area and new Member States' central banks and the ECB. The team's objective was to carry out a forecast evaluation exercise to compare the performance of various models currently used within the ESCB for short-term forecasting of GDP.

Official estimates of GDP growth are released with a considerable delay. For the euro area as a whole, the first official number is a flash estimate, which is published six weeks after the end of the quarter. Meanwhile, economic analysis must rely on monthly indicators which arrive within the quarter such as, e.g. industrial production, retail sales and trade, surveys, and monetary and financial data. In providing the starting point for a longer-term analysis, the assessment of the current state of the economy is therefore an important element in macroeconomic forecasting.

This paper performs a forecasting evaluation of models used in central banks for computing early estimates of current quarter GDP and short-term forecasts of next-quarter GDP. The models are designed to "bridge" early releases of monthly indicators with quarterly GDP. The paper considers a range of models for this purpose, including traditional bridge equations and dynamic factor models (including the generalised dynamic factor as applied to Belgium in NBB WP 80). The key features of the evaluation study presented in this paper are as follows. First, we examine the forecast performance under the real-time flow of data releases, taking account of the non-synchronous release of monthly information throughout the quarter. Second, we use ten large datasets. In addition to the euro area as a whole we consider datasets from six euro area Member States and three new Member States of the European Union.

The main finding obtained for the euro area countries is that bridge models, which timely exploit monthly releases, fare considerably better than quarterly models. Amongst those, dynamic factor models, which exploit a large number of releases, do generally better than averages of traditional bridge equations. Results for the new Member States, on the other hand, are difficult to interpret. All models perform quite badly with respect to naïve benchmarks, but, given the short evaluation sample, it is hard to understand what drives the results.