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Working Paper No. 2/2025: Better policymaking and analysis with a new Dynamic Behavioral Equilibrium Exchange Rate model for small, open economies

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Author: Alexandru Monahov, National Bank of Moldova

Summary

This paper introduces a Dynamic Behavioral Equilibrium Exchange Rate (DBEER) model designed specifically for small, open economies, using Moldova as a primary case study. While traditional BEER models are effective for long-term analysis, they often fail to capture short-term volatility and structural shifts. The proposed DBEER model bridges this gap by employing rolling window estimations. Furthermore, the paper finds that adding Remittances/GDP as a regressor significantly improves the outcome of the model for small, open economies.

The paper also introduces two novel performance metrics – the Dynamic Partial R2 and Relative Dynamic Partial R2 – which allow policymakers to quantify the evolving importance of different economic drivers over time, rather than relying on a static average of explanatory power.

Key Findings:

- **Superior Model Fit**: The dynamic approach significantly outperforms traditional full-sample BEER models (higher R2), providing a predicted exchange rate series that closely tracks actual movements, even during periods of high volatility.
- **The Dominance of the Balassa-Samuelson Effect**: Across all time horizons, productivity growth differentials (Balassa-Samuelson) remain the most robust and consistent driver of the real exchange rate (RER).
- **Important Role of Remittances**: In small, open economies, remittances are a primary driver of currency valuation. However, their impact is non-linear: during stable periods, they tend to appreciate the RER, but during crises, this relationship can invert as recipients hoard foreign currency.
- **Macro-Financial Linkages**: Strong correlations exist between the "BEER Gap" (the difference between actual and equilibrium rates) and various indicators, including government bond yields, dollarization levels, economic growth and prices.

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