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## Abstract

This paper uses the semi-structural Laubach and Williams model to estimate the time-varying natural rate of interest by Kalman filter and Maximum Likelihood method, applying it for the first time to Czech data. The results show a significant decrease of the natural interest rate during the past decade, which constitutes further evidence for the wide-spread notion that structural factors in many countries have shifted after the global financial crisis. The paper's contribution is mainly represented by preparing ground for further research. It concludes that the basic version of the Laubach and Williams model is not optimal for the Czech environment and suggests appropriate adjustments to it. It discusses and analyzes sources of potential problems with the estimation, notably the issues of singularity and model specification. Eventually the paper concludes that due to the low significance of results and the uncertainty of gains and losses related to a policy switch, the best reaction of the central bank would be to keep the current regime and inflation target.

**JEL Classification** C32, E43, E52, O40

**Keywords** natural real interest rate, inflation target, inflation measurement, monetary policy, Kalman filter, trend growth

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