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MODELLING THE EVOLUTION OF MONETARY POLICY IN THE UNITED KINGDOM

Abstract:

We attempt to model changes in monetary policy of the Bank of England and describe how they affect inflation and economic activity in the United Kingdom (UK). Specifically, we explicitly incorporate the zero lower bound of the nominal interest rate and extend the standard time-varying parameter vector autoregressive with stochastic volatility (TVP-VAR) model to allow the central bank to use different policy instruments where necessary. Our data sample runs from 1993 through 2017 on a monthly basis with the first 40 observations as training samples. For estimation, we opt to follow the Uhlig (2005) findings that ‘successful identification needs to deliver results matching the conventional wisdom’ and impose priori restrictions to our extended TVP-VAR model. An efficient Markov chain Monte Carlo procedure is developed in the context of Bayesian inference. Overall, our empirical results show a dynamic relationship between monetary policy and the macroeconomic performance in the UK. For the post-2009 period when the short-term rate of interest hits the effective zero lower bound, we show that this relationship can be well detected through changes in money supply rather than shifts in the nominal interest rate. Regarding the impact of monetary policy, it takes roughly two years for the interest rate adjustment to have its largest effect on inflation and one year to have its peak effect on real activity. Consistent with our previous studies, we find changes in the inflation target of the Bank of England. This suggests that in order to accommodate changes in its preference over inflation stabilisation, the Bank does not only adjust its response to economic shocks but also gradually and implicitly changes its short-term objective of the inflation rate.

Keywords:

Monetary policy, zero lower bound, time-varying parameter vector autoregressive

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