Inflation Stabilization and Welfare
(and Model Uncertainty)

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Abstract

Woodford (2002) showed that the quadratic loss function commonly used for the calculation of optimal monetary policy rules can be derived as a quadratic approximation of the utility of the representative agent. In this paper, private sector agents face stochastic shocks to preferences and technology as in Woodford (2002). However, they are not completely confident in the model they have for the evolution of these shocks. In light of this uncertainty, they make their decisions in such a way as to be robust to small deviations from their approximating model (in the sense of Hansen and Sargent (2008)). The effects of this relaxation of rational expectations on the approximate loss function used by the monetary authority and the consequent implications for monetary policy are examined. In contrast to Woodford (2005), the deviation from rational expectations is imposed before the derivation of the aggregate supply relation.

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