The Optimal Monetary Policy Rule: the Role of Asymmetries and Reputation*

Filip Rozsypal

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Abstract

I study the optimal policy rule of a central bank under an asymmetric information and reputation building setting. I find that the optimal reaction function is nonlinear, despite a standard quadratic loss function and linear Phillips curve. The asymmetry arises from the signal extraction problem of the agents. Given this setting, I analyze the propositions of Rogoff and Blinder how to solve inflationary bias. I find that in the both cases the optimal policy function is nonlinear. Furthermore, the Blinder setting delivers higher value of social welfare.

1 Introduction

As of October 2011, the Bank of England has overshot its 2% inflation target for 22 months in a row. At the same time, in the letter to the Chancellor of the Exchequer, the governor of the bank Mervyn King argued that the bleak economic outlook over the medium run required to take further expansionary measures.

There are two possible explanations for this track record. Either the internal forecast turned out to be overoptimistic, or the central bank has not been following its symmetric target. The length of the period with overshooting the target would suggest the latter, but the huge uncertainty about the global macroeconomic outlook makes the former explanation also plausible. In practice, an economic agent cannot be sure which alternative is causing the difference between the central bank's announced target and realized inflation.[1]

In this paper, I explicitly model this uncertainty. In particular, the central bank announces the policy it plans to follow and the representative agent observes only a noisy outcome of the actions of the central bank and therefore she cannot directly observe whether the bank actually follows its announcement or not.

The main conclusion of my paper is that the optimal policy rule can be nonlinear even if the loss function of the central bank is quadratic. In other words, estimating a nonlinear policy rule is not sufficient to conclude that the central bank has asymmetric preferences.

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[1]In August 2011, the Inflation Attitudes Survey conducted by the Bank of England showed that 46% of people think that the inflation was "about right", while the median expected inflation in 12 months was 3.5%, so well above the target.