

[Transitory interest-rate pegs under imperfect credibility](#)

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This paper considers the effects of a central bank announcing that it will hold interest rates at a specific value for several quarters when the private sector does not fully believe the announcement. In particular, much of our analysis focuses on an announcement by the central bank that it will hold interest rates below the level that the private sector would otherwise expect for a given length of time. After that time is up, the central bank goes back to setting interest rates in line with a rule that describes how it systematically adjusts interest rates to developments in economic variables such as inflation. To model the announcement as imperfectly credible, we assume that there is a probability that the policymaker may go back to setting interest rates in accordance with the rule at an earlier date than announced.

We find that when the announcement to hold interest rates lower for longer is imperfectly credible, the effects on inflation and output (and other variables) can be much smaller than if the announcement were perfectly credible with the private sector.

By doing so, we provide a solution to what has become known as the “forward guidance puzzle” (Del Negro et al, 2012). This is the finding that, in so-called New Keynesian models (which central banks routinely use for policy analysis), promises to hold interest rates below the level that households and firms expect for an extended period of time generates responses of variables such as inflation and output that are implausibly large. This puzzle has been of interest because several central banks have implemented “forward guidance”, which has been interpreted by some as a promise to hold the policy rate lower than had been previously expected: a so-called lower-for-longer (LFL) policy. In other words, New Keynesian models predict that fully credible LFL policies can generate very large effects.

That LFL policies might be imperfectly credible arises from the possibility that the policymaker may be tempted to raise interest rates earlier than announced. Indeed, we show that the central bank may have an incentive to renounce the LFL policy when it is perfectly credible with the private sector. This is because the central bank can achieve better macroeconomic outcomes (measured by a loss function defined over the squared deviations of inflation from target and the output gap) if it abandons its announcement to hold interest rates low after it has been made, rather than continue to hold interest rates down as promised. This means that there is an incentive to renounce the policy.

Because the policymaker's incentive to renounce the LFL policy depends on the outcomes for inflation and the output gap, it is arguable that the probability that it will renounce the policy early – which we interpret as a measure of the degree of imperfect credibility – should also depend on macroeconomic outcomes. Therefore, we examine the case when the degree of imperfect credibility depends on macroeconomic outcomes. We then compare it to the case in which the degree of imperfect credibility is fixed and does not depend on the state of the economy. We find that allowing for the degree of imperfect credibility to be related to developments in the economy tends to dampen the response of macroeconomic variables to an LFL policy announcement by more than under exogenous imperfect credibility.