Referee report on "Macroeconomic Dynamics and the IS Puzzle"

This paper empirically studies the negative dependence of the output gap on the real interest rate, the well-known IS relation. The authors are motivated by the works of Rudebusch and Svensson (1999, 2002) and of Goodhart and Hofmann (2005). The authors identify that although Rudebusch and Svensson (1999, 2002) find a statistically significant negative relation between real interest rate and output gap, by reproducing their results with different inflation measures or changing the data range they show that the relation is not yet statistically significant. Also, the authors reproduce work the of Goodhart and Hofmann (2005) and they find that the IS relation is statistically insignificant for any inflation measure and any time range. This way they motivate the reader that there exists a Puzzle where the IS relation seems statistically insignificant for the US data. Initially, they conclude that the origins of the IS puzzle are the changes in the inflation measure and the changes in the time range of the input data. To overcome this issue and solve the puzzle, they relax the assumption of non-time dependence in the achievement of the equilibrium response between output and real interest rate. They show that for the G7 countries except Italy and Japan the relation of output and real interest rate in statistically significant and negative in the IS relation, for any choice of the inflation measure. In this way, they solve the Puzzle.
My general assessment is that the paper is very well written and very easy to follow. Their critique and reproduction of the works of Rudebusch and Svensson (1999, 2002) and of Goodhart and Hofmann (2005) is methodologically robust and they make the main point of their paper crystal clear. Also, their assumption of time-varying response of output and real interest rate (i.e. the dynamic version of the IS relation) is theoretically very intuitive. Also, the authors well justify the time range they use and their results are very interesting and make a valuable contribution to the literature they are referring to.

My main comments for improving their work are the following:

Comment 1. *(Reproduce the works of Rudebusch and Svensson (1999, 2002) and of Goodhart and Hofmann (2005) for the G7 countries instead of the US).*

According the results of the authors it seems that their work solves the Puzzle of the IS relation that appears on the US data. However, I would like to know if there exists is a Puzzle for the other G7 countries. In other words, if someone produces the works of Rudebusch and Svensson (1999, 2002) and of Goodhart and Hofmann (2005) for the other G7 will those works produce mixed results as for the US?
My suggestion is that the authors produce Table 2 for the other countries in their sample and for the time range they do their work. Also, it would be helpful to analyze any differences relative to the results for the US data. First, this will enhance the justification for the existence of such a Puzzle in other countries, second, it will be a robustness of the existence of a time varying relation in the IS relation.

Comment 2. (*Robustness of time varying relation in the IS relation and the origins of the IS relation.)*

While the existence of the non-instantaneous equilibrium responce in the relation of real interest rate and output gap is very intuitive in term of theoretical dynamic macroeconomic models, I would like to see a method to empirically justify this relation. Also, once the IS relation has its ttheoretical origins on the negative relation between real interest rates and investment rates it would be helpful to present the results in terms of the investment rate as a depended variable. If they do that work, with and without the assumption of time varying equilibrium responce will strength their argument. Otherwise the authors the may come up with another methodology to empirically formalize the relaxation of the assumption of the non-instantaneous achievement of the equilibrium response.

Comment 3. *(Strength the contribution of the paper to the literature)*
The authors motivate and compare their results to Rudebusch and Svensson (1999, 2002) and of Goodhart and Hofmann (2005). I would like to see a more detailed analysis of their contribution relative to other papers in the literature studying this relation like, for instance among others, the work of Laubach (2003) and Garnier and Wilhelmsen (2009)

References

Laubach, Thomas and John C. Williams (2003), "Measuring the Natural Rate of Interest", Review of Economics and Statistics, vol 85(4), p. 1063-1070.
Julien Garnier and Bjorn-Roger Wilhelmsen (2009), The natural rate of interest and the output gap in the euro area: a joint estimation, Empirical Economics, May 2009, Volume 36, Issue 2, pp 297–319.