

Foreword

Following the recent financial crisis, academics and policymakers have been engaged in a wide-ranging reappraisal of the pros and cons of alternative monetary regimes and monetary policy instruments. The crisis highlighted two key issues which, before 2007-2008, had received scant attention: first, the role played by asset price bubbles in macroeconomic fluctuations; second, the fact that the probability of hitting the zero lower bound (ZLB) is significantly greater than previously thought.

As for the former issue, the professionals' response has been to augment the toolkit of monetary policy instruments with so-called 'macro-prudential policies' (e.g., limits to the size of a real estate loan compared to the price of the house which is being bought, or the income of the borrower). By surgically targeting disequilibria in specific asset markets' segments, these (yet untested) instruments promise, in principle, to take away the froth from that particular segment without the deleterious, economy-wide recessionary side-effects which would result from an interest rate hike.

As for the ZLB, research has focused on several alternative 'lines of attack'. In particular, on the one hand, there has been an intensive research effort aimed at identifying which policies (quantitative easing, 'forward guidance', etc.) can jolt the economy out of the recession once the ZLB has been reached, so that standard monetary policy has all but lost its effectiveness. A second group of contributions has instead explored alternative ways of 'hardwiring' into the system a set of self-stabilizing expectations, in order to make the economy more resilient in the face of shocks which push it to the ZLB, and to make it easier, for policymakers, to push it out of that state once it has been reached. Under this respect, the fundamental theoretical contributions of Krugman (1998), and of

Eggertson and Woodford (2003), have highlighted how a comparatively simple (at least, in principle) solution to the problem posed by the ZLB would be to create inflationary expectations in that state of the world. The rationale behind this proposal is straightforward: given that, by definition, at the ZLB the short-term interest rate is stuck at zero - so that, different from the 'normal state of affairs', it does not react to macroeconomic developments (in particular, it does not react to fluctuations in either inflation or inflationary expectations) - any change in expected inflation maps, one-for-one, into a corresponding change in the opposite direction in the real ex ante interest rate. This automatically implies that an increase in expected inflation causes a corresponding decrease in the real ex ante interest rate, thus stimulating demand and pushing the economy out of the recession. Eggertson and Woodford (2003) have shown that the optimal policy, which takes an extremely convoluted and non-transparent form, can be well-approximated, to a quite remarkable extent, by a simple price-level targeting rule. The reason for this is, once again, straightforward: if the central bank commits to keeping the price level constant, this logically implies that deflation today ought to be followed by inflation tomorrow, simply because any price decline has to be followed by a corresponding and identical price increase, in order to bring prices to their original level. This implies that - if the price level targeting policy is credible - the deflation associated with the recessionary shock which pushed the economy down to the ZLB automatically creates inflationary expectations, thus introducing into the economy an automatic stabilizer of aggregate demand. As discussed by Eggertson and Woodford (2003), a simple price-level targeting rule presents two fundamental advantages compared to the optimal policy. First, as previously mentioned, it is much easier in terms of formulation, and it can therefore be easily communicated to the public. Second, because of this, it is comparatively easy, for a central bank, to build credibility about such a policy: quite simply, it has to stick to this policy 'through thick and thin' - that is, in all states of the world, including when the ZLB is not binding. In this way the public regularly observes the policy being implemented, and the central bank builds up a reputation for following such a policy.

A limitation of this literature, as it currently stands, is that the overwhelming majority of these contributions have been of a theoretical nature, and have been based on calibrated simple, purely forward-looking New Keynesian (DSGE) models. The fact that these models have been known, for about two decades now, to provide an extremely poor fit to real-world macroeconomic data represents a significant obstacle to the possible widespread adoption of price-level targeting rules. Quite obviously, before switching to an alternative monetary policy rule, policymakers want to have a reasonably precise idea of how the economy is going to perform conditional on that rule. In particular, in the spirit of the ‘robustness’ approach to policy, they want to be reassured that the rule will not create ‘tail risks’, or extreme reactions to specific shocks or circumstances. Since DSGE models’ behavior depends, to a sometimes crucial extent, on the specific values taken by the model’s structural parameters. It logically follows that only a comparative assessment of the performance of a price-level targeting rule based on an estimated (as opposed to calibrated), and relatively sophisticated DSGE model might convince policymakers of the wisdom of adopting such a policy.

Lukas Heim’s Master’s thesis ought to be assessed against this general background. The thesis is one of the very few existing attempts to evaluate the performance of a price-level targeting rule, compared to that of a standard Taylor-type rule, based on a medium-scale DSGE model which has been estimated based on state-of-the-art Bayesian methods. Specifically, Lukas Heim first builds such a model for the Swiss economy by expanding the framework proposed by Galí and Monacelli (2005) and Monacelli (2005), enriching it with habit formation in consumption, price indexation, labor market imperfections, and several additional structural disturbances. Within this framework, the Euro area plays the role of the large foreign economy. The model is then estimated via standard Bayesian techniques (specifically, Random-Walk Metropolis). Estimation is performed conditional on a standard Taylor-type rule for both Switzerland and the Euro area. Based on the estimated model, Lukas Heim then explores, for Switzerland, the performance of a price-

level targeting rule compared to that resulting from the Taylor-type rule used in estimation. A key finding emerging from the impulse response functions to the structural disturbances is that whereas the volatility of the nominal interest rate is very similar conditional on the two rules; and - exactly as expected - the volatility of inflation is quite significantly lower under the price-level targeting rule; the volatility of the output gap is markedly higher conditional on either productivity or preference shocks. This is a very important result, because it suggests that in the real world - as opposed to the simple, purely forward-looking New Keynesian model - the adoption of a price level-targeting rule would likely produce an increase in the volatility of real economic activity ‘across the board’ - that is, conditional on both supply-side and demand-side shocks. In turn, this implies that a policymaker who assigns a non-negligible weight to the volatility of real economic activity in her/his loss function would probably have some reservations about adopting a price-level targeting rule for Switzerland. Under this respect, Lukas Heim’s work therefore implicitly provides support to the monetary policy regime currently implemented by the Swiss National Bank.

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