

Response to Seitz and Tödter,  
“How the  $P^*$  Model Rationalises Monetary Targeting—  
A Comment on Svensson”

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**Abstract**

Seitz and Tödter argue, counter to Svensson, that the  $P^*$  model provides a rationale for money-growth targeting. In particular, they argue that “money growth targeting is a special form of inflation forecast targeting based on a ‘limited’ information set. In contrast to ‘full information’ inflation forecast targeting, money growth targeting is likely to be more robust under changing conditions of the real world.”

However, money-growth targeting is better described as a special case of inflation targeting, namely when money growth is considered to be the *only* predictor of future inflation. But there is overwhelming empirical evidence that there are not only other, but better, predictors of future inflation than money growth, which makes inflation-forecast targeting superior to money-growth targeting. Inflation-forecast targeting is indeed *more* robust (in the sense of using available information and allowing judgemental adjustments in a flexible way) than monetary targeting.

In particular, in the  $P^*$  model, the real money gap is a better predictor of future inflation than money growth, as demonstrated theoretically by Svensson and empirically by Gerlach and Svensson (the empirical finding is also confirmed by Trecroci and Vega). Therefore, inflation-forecast targeting is superior also within the  $P^*$  model. Under “changing conditions of the real world,” for instance, after the formation of a monetary union, money growth is likely to be particularly unreliable as a predictor of future inflation, making monetary targeting especially unsuitable and nonrobust.

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Seitz and Tödter [4] argue, counter to Svensson [6], that the  $P^*$  model provides a rationale for money-growth targeting. In particular, they argue that “money growth targeting is a special form of inflation forecast targeting based on a ‘limited’ information set. In contrast to ‘full information’ inflation forecast targeting, money growth targeting is likely to be more robust under changing conditions of the real world.”

However, money-growth targeting is better described as a special case of inflation targeting, namely when money growth is considered to be the *only* predictor of future inflation. But there is overwhelming empirical evidence that there are not only other, but better, predictors of future inflation than money growth, which makes inflation-forecast targeting superior to money-growth targeting. Inflation-forecast targeting is indeed *more* robust (in the sense of using available information and allowing judgemental adjustments in a flexible way) than monetary targeting.

In particular, in the  $P^*$  model, the real money gap is a better predictor of future inflation than money growth, as demonstrated theoretically in Svensson [6] and empirically in Gerlach and Svensson [1] (the empirical finding is also confirmed by Trecroci and Vega [9]). Therefore, inflation-forecast targeting is superior also within the  $P^*$  model (superior in the sense of stabilizing inflation around an inflation target without causing unnecessary variability of the output gap). Under “changing conditions of the real world,” for instance, after the formation of a monetary union, money growth is likely to be particularly unreliable as a predictor of future inflation, making monetary targeting especially unsuitable.

1. Seitz and Tödter state that my paper [6] is “algebraical.” It is true that my paper only provides a theoretical argument why money-growth targeting is inferior to inflation targeting in the  $P^*$  model. It doesn’t state in quantitative and empirical terms how inferior money-growth targeting is. However, this is examined in Rudebusch and Svensson [3], for U.S. data (which should have some relevance for the EMU). In a conventional empirical model of aggregate demand and aggregate supply, it is shown that money-growth targeting leads to substantially higher variability in both inflation and the output gap than inflation targeting. In one section of the paper, also a  $P^*$  model is estimated. Interestingly, money-growth targeting performs even worse relative to inflation targeting in the estimated  $P^*$  model than in the conventional model.

2. Seitz and Tödter argue that money-growth targeting is more “robust” than inflation targeting. However, they use “robust” in the sense of “using less information,” regardless of how relevant and reliable that information is. In contrast, inflation-forecast targeting uses all *available and relevant* information (see Svensson and Woodford [8] for details on how partial information is used efficiently). (It is misleading to state that inflation-forecast targeting requires *full* information, as Seitz and Tödter do.)

Because inflation-forecast targeting uses available information efficiently, and in particular allows judgemental adjustments, it is arguably *more* robust than monetary targeting, since monetary targeting (according to Seitz and Tödter) is restricted to use minimal information

regardless of how much information is available. Suppose an inflation-targeting central bank would have no knowledge about the transmission mechanism and know very little about the current state of the economy except M3 growth. In such a situation, given this minuscule information, an inflation-targeting central bank may consider M3 growth the best available predictor of future inflation (actually, under the assumptions, the *only* available predictor). Then inflation targeting would boil down to money-growth targeting. However, these days central banks know quite a bit about the transmission mechanism and about the state of the economy. Therefore, it is efficient to use that additional information.

3. If the central bank has information that the  $P^*$  model explains inflation, it should use the current real money gap and current inflation as its main indicators of future inflation, rather than the money-growth indicator. Thus, if the Eurosystem believes that  $P^*$  model is relevant, it should focus on the real money gap rather than the money-growth indicator!

4. The advantage of referring to the “real money gap” rather than the “price gap” is the connection to monetary aggregates and the connotation with “monetary overhang” that the real money gap may convey. Also, the difference between the real money gap and the Eurosystem’s money-growth indicator becomes apparent.

5. Seitz and Tödter refer to the Bundesbank’s “pragmatic” monetary targeting in support of their argument. But the gist of the pragmatic monetary targeting is to use *more* information than just money growth, and to deliberately deviate from the money-growth target when additional information indicates that there is a conflict between the inflation target and the money-growth target. Thus, this is *not* using only the limited information of M3 growth. This is why Posen [2] calls pragmatic monetary targeting “a monetary masquerade” (and I [5] call it “inflation targeting in disguise”).

6. Seitz and Tödter are right in that constant-interest-rate forecasts give rise to some difficulties. But inflation targeting need not be restricted to the use of such forecasts. My own view (see [7]) is that it is better to construct and publish forecasts conditional on time-varying interest rates, as is already done by the Reserve Bank of New Zealand (and by the Bank of England for market implied forward rates).

7. In general, it is quite damaging to the cause of money-growth targeting that so far no one (to my knowledge) has come up with a convincing example of a model where money-growth targeting is better or more robust than inflation targeting. If advocates of money-growth targeting believe that uncertainty about the model and/or the state of the economy is important

for the case for monetary targeting, they should be able to model this uncertainty explicitly and demonstrate their point. Basically, the advocates want to construct a situation where current money growth is the best predictor of future inflation, the best indicator of “threats to price stability” (at horizons relevant for monetary policy, say 1–3 years). It should bother them that no one has been able to do this yet.

## References

- [1] Gerlach, Stefan, and Lars E.O. Svensson (2000), “Money and Inflation in the Euro Area: A Case for Monetary Indicators?” NBER Working paper No. 8025.
- [2] Posen, Adam (1999), “No Monetary Masquerade for the ECB,” in Ellen Meade, ed., *The European Central Bank: How Accountable? How Decentralized?*, American Institute for Contemporary German Studies, Washington, 39–50.
- [3] Rudebusch, Glenn, and Lars E.O. Svensson (2001), “Eurosystem Monetary Targeting: Lessons from U.S. Data,” *European Economic Review*, forthcoming.
- [4] Seitz, Frank, and Karl-Heinz Tödter (2001), “How the  $P^*$  Model Rationalises Monetary Targeting—A Comment on Svensson,” *German Economic Review*, forthcoming.
- [5] Svensson, Lars E.O. (1999), “Monetary Policy Issues for the Eurosystem,” *Carnegie-Rochester Conferences Series on Public Policy* 51-1, 79–136.
- [6] Svensson, Lars E.O. (2000), “Does the  $P^*$  Model Provide Any Rationale for Monetary Targeting?” *German Economic Review* 1 (February 2000) 69–81.
- [7] Svensson, Lars E.O. (2001), “Independent Review of the Operation of Monetary Policy in New Zealand: Report to the Minister of Finance,” February 2001, [www.iies.su.se/leosven](http://www.iies.su.se/leosven).
- [8] Svensson, Lars E.O., and Michael Woodford (2000), “Indicator Variables for Optimal Policy,” NBER Working Paper No. 7953.
- [9] Trecroci, Carmine, and Juan Luis Vega (2000), “The Information Content of M3 for Future Inflation,” Working Paper No. 33, European Central Bank.