

Discussion of “Indicator
Variables for Optimal Policy,”
by Lars Svensson and Michael
Woodford

James Bullard
Federal Reserve Bank of St. Louis

November 17, 2000
NBER Monetary Economics Group
Cambridge, MA

1 What is in this paper

- The economy is described by a linear system with one-step-ahead forward-looking elements.
- There is a private sector and a policymaker, each with the same noisy information.
- The policymaker wishes to set an instrument in order to achieve a quadratic objective.
- Optimal policy is derived under both discretion and commitment.
- Then, under a separation principle, the optimal filter is derived.

2 Main results

- Clarify, simplify, and amplify earlier results in this area.
- The optimal policy response to imperfectly observed variables is the same as if those variables were perfectly observed, provided one obtains and reacts to the optimal estimate from the noisy data (i.e., properly solves the signal extraction problem).
- When constructing the optimal estimates from the noisy data, the weights one puts on individual indicators do depend inversely on the level of noise.
- An example.

3 As a practical recommendation

- Possibly not much practical difference between an “optimal estimate” and a “noisy observation.”
- Augers to keep the output gap as a key guiding variable, despite widespread dissatisfaction.
- Mysterious reference to money and the ECB.

4 As a positive theory

- The paper is probably best read as a technical point which helps us understand the relationship between optimal policy and optimal filtering.
- But the comparison to Orphanides hints that, by the Svensson and Woodford calculations, 70s policy may have been optimal.
- One might conclude that the 70s experience is simply one possible outcome, even under optimal policy. Another 70s lurking?
- Interesting quantitative exercises could be done in this area.

5 Productivity and unexpected changes in trend

- Somewhat different from mismeasurement.
- The unexpected change in trend presumably induced a transition to a new equilibrium.
- Important questions about the wisdom of trend-cycle decompositions.
- Actual economy could be characterized by time-varying relationships.

6 A related problem

- Agents may want to remain alert to the possibility of structural change.
- Suppose private and public sector agents use the Kalman filter to compensate for uncertainty about reduced form relationships.
- Could they eventually learn the rational expectations equilibrium of the system?
- Available literature suggests not.
- A policymaker would be introducing more variability into the economy ...
- ... but with the benefit of being better able to cope with structural change.

7 Summary

- A very nice paper about which one can have little direct dispute.
- Some questions on practicality of what is being claimed.
- Some questions about ability of such a formulation to reconcile the 70s inflation experience with optimal policy, which the authors hint at by comparing with Orphanides.
- Trend changes in the data which partially motivate the paper are somewhat different from pure measurement issues.
- It would be interesting to understand the effects of learning in this and related contexts.