Asset Prices and Monetary Policy

by

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and

Ichiro Fukunaga

Discussion by

Henrik Jensen

University of Copenhagen, CEPR and EPRU

Central Bank Workshop on Macroeconomic Modelling

Oslo, September 14, 2007

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Objective of paper

- Contribute to the perennial question in monetary macroeconomics:
  - Which macroeconomic variables should determine the course of monetary policy conduct?
- A particular topical aggregate is considered: Asset Prices
  - Can monetary policy improve by taking asset price movements into account?
  - If so, how?

Modelling approach

- Authors adopt New-Keynesian DSGE model with financial frictions
  - Woodford (2003) meets Bernanke, Gertler and Gilchrist (1999)
  - Two main inefficiencies coexist in the economy: Price rigidity and countercyclical external finance premium
  - Former distortion calls for price stability; latter calls for dampening of business cycle fluctuations
- Model is calibrated and output gap (appropriately defined) and inflation variability are evaluated under different interest instrument rules

Main results

- Policy are constrained to be nominal interest rules of the forms

$$i_t = 1.1\widetilde{\pi}_t$$

$$i_t = 2.0\widetilde{\pi}_t$$

$$i_t = 2.0\widetilde{\pi}_t + \phi_q \left(\widetilde{q}_t - \widetilde{q}_t^*\right)$$

- With shocks to technology and net worth, rule $i_t = 2.0\widetilde{\pi}_t + \phi_q \left(\widetilde{q}_t - \widetilde{q}_t^*\right)$ performs well with $\phi_q > 0$
- With noisy observation of technology shocks, rule $i_t = 2.0\widetilde{\pi}_t + \phi_q \widetilde{q}$ performs well with $\phi_q > 0$
- "Well" is in terms of a welfare criterion that equally penalizes output gap and inflation variability

General comments

- Well-motivated analysis!
- Uses variation of modern and well-established model framework based on solid micro-foundations
- Clear and intuitively written (although it to my taste fits too well into the new tradition in Monetary Economics: papers should be at least 70 pages long)
- Makes clear and convincing points within the framework

Further comments: Choice of arguments in rule

- Inflation and asset prices are obvious candidates
- Why introduce asset prices only in the case of "strong" response to inflation?
- Why not, as is common, have output gap as argument in rule?
  - One suspects that presence of asset prices is a substitute of output gap
  - If output gap was included, maybe the introduction of asset prices would have lesser impact

Further comments: Choice of arguments in rule (II)

- With noisy observation of technology shocks, the rule $i_t = 2.0\widetilde{\pi}_t + \phi_q \widetilde{q}$ provides best outcome of all experiments
- A bit strange, but reason may be that the exogenous part "$-\widetilde{q}_t^*$" is excluded from the rule
  - Hence, it makes policy less noisy in way preferably for the given loss function
  - Wouldn't it then a good idea to ignore "$-\widetilde{q}_t^*$" in case where shocks are observable?
  - The asset price gap has no welfare implication in the model
- Obviously, some rule $i_t = 2.0\widetilde{\pi}_t + \phi_q \left(\widetilde{q}_t - \phi^* \widetilde{q}_t^*\right),\ \phi^* \gtrless 0$ would be desirable

Further comments: The welfare criterion

- As acknowledged by authors, the welfare criterion is *ad hoc*
  - Is has no relation to the underlying micro-founded model
- A brutal implication would be to discard the results as useless

Further comments: The welfare criterion (II)

- A constructive approach would look into better ways of using an *ad hoc* welfare criterion
  - Why not incorporate asset price gap into loss function? It is an identified distortion!
  - Why not use weights in accordance with micro-founded literature (higher weight on inflation) — or *at least* make some sensitivity analyses?
  - Why not assess the *best* policy under a given loss function (to gauge the importance of "improvements" by various policy rules) — i.e., do optimization?

Further comments:
What could correct welfare analysis bring?

- Desirable with analysis based on model-consistent welfare measure (it is a normative analysis)
- Aggregation is not simple in this framework, but the representative household utility is an obvious candidate
- That could be analyzed, e.g., by using Schmitt-Grohé and Uribe's (2004) second-order pertubation methods

Further comments:
What could correct welfare analysis bring? (II)

- Schmitt-Grohé and Uribe (2004, 2007) show that maximum welfare can almost be achieved by an optimized and aggressive Taylor-type rule — essentially amounting to "strict" inflation targeting
  - Changes in policy rule parameters have often miniscule welfare effects (so they argue that main objective of policy is to secure determinacy)
  - . . . but adding some variables to the Taylor rule could be very harmful to welfare

- *If* their results have some generality, one may get close to optimum by an aggressive simple Taylor rule?
- Addressing asset prices may do nothing, or may even be harmful?
- We *don't know*, but it would be an interesting project to consider

General concluding comments

- Can we use the new types of DSGE models for normative questions?
- Main problem: Business cycle fluctuations per se are not very costly in the models (Lucas, 1987, lurks in the background)
  - Searching for "better" policy rules brings out, at best, very modest welfare improvements
  - Only real robust welfare implication from the models so far: *Stabilize inflation at almost all costs*

    (This is perhaps to be expected with the current state of supply-side modelling.)
- Ichiro and Masashi make a compelling case for addressing asset prices in monetary policy, but I think more evidence is needed