

Three Essays on Monetary Policy

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Opponent's Report
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July 28, 2018

Paper I: Endogenous Asset Price Bubbles and the Credit Cycle: The Role of Monetary Policy

Summary

The paper uses a New Keynesian model with the financial accelerator and investors with limited liability to investigate how the non-fundamental component of asset prices (bubbles) affects the credit cycle. While asset prices affect macroeconomic and financial variables, optimal monetary policy in the model does not react to asset prices or their (volatile) non-fundamental component.

Comments

The paper contributes to the recent literature macro-finance interactions by investigating the mechanism based on the financial accelerator and limited liability and analyzes its implications for monetary policy. The work adds to the debate on whether central banks should respond to asset prices, which has been revisited after the financial and economic crisis.

The following points could be considered for a next draft:

- I'm not an insider in the literature but found the labels on the fundamental/non-fundamental components of asset prices potentially controversial. It was not clear to me why one would want to identify the non-fundamental component (bubble) as the part of the asset price dynamics caused by investors' limited liability and moral hazard. (To me such analysis of bubbles is more attractive in a setup like Martin and Ventura (2014) which features multiple equilibria.)

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- The paper should better clarify its contribution with respect to the classic financial accelerator literature (BGG, 1999 and its descendants)—to what extent this work brings additional new insights about macro-finance interactions and the role of monetary policy.
- I found the result that the financial sector acts as a shock absorber (not just as a source of fluctuations) very interesting. Would it be interesting to analyze how macro-prudential policy (e.g., rules on the minimum capital of banks) would affect the results in the paper? To what extent would it be optimal to impose such rules? How would such macro-prudential rules affect the conduct of monetary policy?

Paper II: Adverse Effects of Monetary Policy Signalling: The Updating Channel

Summary

The paper presents a model in which changes in the central bank policy rates affect the reaction of the economy because some households are boundedly rational. Under some calibrations, the model is able to capture a surprising reaction of inflation to monetary policy ('the price puzzle'): an increase in inflation following a monetary policy tightening. The empirical part documents that forecasts of professional forecasters negatively react to monetary policy shocks.

Comments

The paper speaks to one of the key questions of macroeconomics: "How does inflation and the economy in general react to monetary policy?" I believe investigating the question for alternative regimes of the formation of expectations (including bounded rationality) is an important current area of macroeconomic research.

The following points could be considered for a next draft:

- As a general point, I find it hard to truly believe that restrictive monetary policy increases inflation. To me it seems it must be that the VARs that find the price puzzle are wrong (do not correctly identify the impulse response). It would be useful to include additional discussion on how robust the evidence on the price puzzle is (with an overview of the many identification strategies to estimate VAR impulse responses, some of which claim to resolve the price puzzle).¹

¹A couple of relevant recent papers: Marek Jarocinski and Peter Karadi (2018): Deconstructing monetary policy surprises: the role of information shocks, ECB working paper 2133. Philippe Andrade, Benoit Mojon, Gaetano Gaballo and Eric Mengus (2017): Forward Guidance and Heterogeneous Beliefs.

One avenue I would find really interesting for another paper would be that *in certain specific time periods* indeed price puzzle can arise, e.g., due to the fact that the relevant parameters (γ, χ, ω) vary over time: at some periods of time more people are boundedly rational and/or learn more slowly. This feature would then imply that the price puzzle can arise in certain times.

- It could be considered to switch the ordering of the empirical and theoretical sections, first reporting the empirical facts and then proposing a model that can explain them.
- My sense is that the calibrated model can match the price puzzle only for quite specific subset of parameter values which may not be realistic. I'm specifically thinking of the high baseline value of the habit persistence parameter $\chi = 0.9$.² The literature suggests a lower value of χ , say, $\chi \approx 0.6$ – 0.8 .³
- The authors should also provide more evidence (eg, citing the literature) about where reasonable values of the fraction of fully rational agents (ω) and the speed of learning (γ) lie.
- The regression in the empirical part is only rather weakly related to the theoretical model. A preferable (more ambitious) way to proceed would be to directly estimate the relevant structural parameters of the theoretical model like Fuhrer (2000) (and many others) does (using, e.g., the simulated method of moments).
- The empirical part (Table 2.3) should also report fixed-effect estimates, not just random effects. (My sense is that current empirical work often prefers fixed effects to random effects because fixed effects are consistent under less restrictive assumptions.)

Papers III: Financial Stress and Its Non-Linear Impact on CEE Exchange Rates

Summary

The paper estimates how the reaction of the CEE exchange rates to financial stress varies across three regimes of risk. In the high-risk regime risk aversion increases and the CEE currencies depreciate as investors flee to safe havens. In the low-risk regime the reaction of the CEE exchange rates is more muted.

²In the paper this value is justified by referring to Fuhrer (2000). But in that paper Fuhrer gives 2 estimates of χ using FIML and GMM. His preferred estimate seems to be $\chi = 0.8$, also because the other estimate, $\chi = 0.9$, has a very large standard error.

³See the paper by: Tomas Havranek, Marek Rusnak, and Anna Sokolova. Habit formation in consumption: A meta-analysis. *European Economic Review*, 95:142–167, 2017.

Comments

The paper provides useful new evidence for researchers working on small open economies about the interaction between financial stress and exchange rate dynamics. The finding that during periods of financial stress exchange rates of small economies depreciates is important to take into account by central banks when considering the costs of financial stress and when deciding about optimal monetary policy.

The following points could be considered for a next draft:

- I suggest the authors more clearly highlight the contribution of this paper with respect the existing work on exchange rates in emerging markets and CEE countries.
- I understand the key contribution is the empirical estimation part; I think it could be considered whether the section on the theoretical model should not be moved to an appendix or dropped. My worry is that the setup is a bit of a toy model and is not tightly enough linked to the empirical findings.
- For the empirical model, the work could be extended in a number of directions.
 - First, the authors should do more work to support the choice of the number of regimes (3) in the empirical model.⁴ For example, are there formal statistical tests that suggest that the model with 3 regimes performs better than the model with 2 or 4 regimes?
 - Second, ideally some more variables (e.g., GDP or unemployment) should be included in the VAR, given that they may affect the dynamics of exchange rates separately from financial stress.
 - Third, I understand the models were estimated country by country. More statistical power could be gained using a panel estimation, jointly across all countries.
 - Fourth (and related), it should be discussed to what extent the regimes should be country-specific? The financial stress indicators are global/euro area-wide, not country-specific.⁵ It would be interesting to test whether a model with regimes that coincide across the countries can be rejected.
 - Finally, it could be formally tested whether the response in Figure 3.9 are significantly different from each other.

⁴It seems a bit arbitrary also because the theory model only has two regimes.

⁵Also, ideally, one would want to use *country-level* indicators of financial stress, not indicators of stress in the euro area.

Summary and Overall Comments on the Thesis

I believe the author has demonstrated his talent for identifying interesting economic questions and acquired quantitative skills required to effectively address these questions. His dissertation documents that he has adequate skills to solve state-of-the-art theoretical models and deliver relevant empirical evidence. All three papers address questions important from both academic perspective and for central banks.

The suggestions above are meant for the future work, after the thesis has been defended.

The thesis satisfies formal and content requirements for a PhD thesis in economics. I recommend the dissertation for a defense.