Discussion of Klaus Adam and Michael Woodford

Leaning Against Housing Prices as Robustly Optimal Monetary Policy

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- Aim of the paper: Create a role for monetary policy in reaction to housing prices

- Main conclusion: Monetary policy should lean against surprises in housing prices expectations, without distinguishing between fundamental and non-fundamental changes in prices

- The policy is robust for small departures from rational expectations, meaning that it allows to achieve the best possible lower bound for the set of near rational expectations equilibria

- Enviroment where mispricing arises because of distorted beliefs. This matters for optimality because, very much like a tax, it implies a resource misallocation between housing and other activities. This is an environment where we can apply almost directly principles from optimal taxation

- With an over-supply of housing, and distorted beliefs, a surprise increase in prices should lead to a tighter reaction from monetary policy relative to the case with rational-expectations

OUTLINE

- Background: Principles of optimal taxation and role of monetary policy
- The role of distorted beliefs
- What did we learn?
- Which questions are still there?

Background

- In cashless models, monetary policy is neutral in a stationary economy. The **power** of monetary policy comes from its ability to act by surprise, distorting the economy relative to the flexible price one
  - Surprise inflation creates distortions in the $C/\ labor$ margin, with ex-post mark-ups that differ from the ex-ante ones
  - Surprise inflation also creates production inefficiencies associated with price dispersion

- The **optimal** use of monetary policy is in reaction to shocks:
  - to optimally decentralize the flexible price allocation
  - or to optimally depart from it
- When shocks are shocks to technology or preferences, the optimal policy is, grosso modo, to decentralize the flexible price allocation

- When shocks are cost-push shocks:
  - under flexible prices there are no instruments to deal with the distortions created by those shocks
  - under sticky prices, monetary policy can be used but there are costs associated with price dispersion

- In response to cost-push shocks, the optimal policy is a combination of fiscal and monetary policy
  - fiscal policy is used to eliminate the distortions caused by the cost push shocks
  - and monetary policy is used to replicate the flexible price allocation

- If fiscal policy is not considered, then monetary policy could be used to replicate flexible prices

- but it is not optimal to do so, since the flexible price allocations as time-varying distortions

Optimal stationary equilibrium

- The optimal stationary equilibrium is quite standard
  - Without shocks sticky prices and distorted beliefs are irrelevant
  - In their model, with exogenous fiscal instruments, there are still distortions:
    * an average mark up coming from monopolistic competition (subsidize)
    * government spending is an exogenous share of production (tax)
    * exogenous subsidy to housing (should not have it)
    * exogenous sales tax does not achieve the second/third best

Optimal policy in response to shocks

- The equilibrium choice between consumption and housing, also in reaction to shocks, should satisfy

$$\frac{k_t^{1-\alpha}}{A_t^d \left(1+\tau_t^c\right)\left(1+s^d\right)} c_t^{-\sigma^{-1}} = \overline{\xi}_t$$

  - Without instrument restritions the best choice is $\left(1+\tau_t^c\right)\left(1+s^d\right) = 0$, that is for a zero tax on labor income, consumption and housing should be taxed (subsidized) at the same rate

  - With restritions, $s^d > 0$, and in the RE no instrument to react to shocks

The role of distorted beliefs

- With distorted beliefs, and with NRE, a realization of ξ_t implies a change of expectations of housing prices. The sequence of $\overline{\xi}_t^{NRE}$ will induce fluctuations that deviate from the one with $\overline{\xi}_t$

$$\frac{k_t^{1-\alpha}}{A_t^d} c_t^{-\sigma^{-1}} = \left(1 + s^d\right) \overline{\xi}_t^{NRE}$$

- The distorted component of expectations is a cost-push shock
  - With fiscal instruments (s_t^d) the cost push shocks could be neutralized
  - With monetary policy only, and with sticky prices, monetary policy can be used to affect $\overline{\xi}_t^{NRE}$.
    * $\overline{\xi}_t^{NRE}$ becomes a "quasi" policy instrument.
    * Monetary policy also affects the consumption/labor margin and price dispersion
- Distorted beliefs on housing prices open a new role for monetary policy
  - The role is similar to the standard one: Surprises changes in monetary policy affect the consumption/ labor margin and create relative price distortions

  - The optimal way to use monetary policy, in response to distorted beliefs, depends on how the three margins are affected

- The reason why $\bar{\xi}_t^{NRE}$ is a "quasi" instrument is that monetary policy is only effective in defining the set of feasible private sector beliefs consistent with the policy. The optimal policy is the one that gives the highest lower bound for expected utility welfare for the set of equilibria with NRE associated with that policy

- The optimal reaction of policy is to lean against the distorted beliefs, meaning that for an increase of housing prices, monetary policy should be tighter than with RE

- The optimal reaction to positive housing price expectations (positive distorted beliefs?) leads to inflation and output being lower than in the optimal paths with RE

- The reverse occurs for negative surprises in prices due to the stabilizing role of monetary policy

What have we learned?

- New mechanism through which surprises in monetary policy can affect the allocation of resources in the economy, through the effect of monetary policy on housing prices expectations

- It can be optimal to exploit this new mechanism, even if there is not a unique mapping between monetary policy and distorted price expectations

- For the particular example in the paper, monetary policy should lean against housing prices

- Which questions are left after this exercise?

- The reason why policy leans againg housing prices is because of over supply of housing in the SS. Why is this?

- Why is the case of over supply of housing the empirically realistic case? The empirically realistic case is assumed to be a too large housing sector relative to consumer non-durables, coming from special treatment of housing services. For the euro area we have that the application of VAT on housing varies across euro area countries, with consumption of housing services in the euro area only partly exposed to VAT. However we have to take into account the recurrent tax on property, which can be see as an approximation of a tax on imputed rents. Cadastral values have often not been revised, turning the base sometimes far away from property market

values. To compensate all but two countries apply transaction taxes on property. Subsidizing housing?

- The conclusion that the optimal response of policy does not require to distinguish between fundamental and non-fundamental price changes comes from the positive correlation between the two components. Can we say that the distinction is not relevant?

- The reason why there is leaning against the wind here is not as much of a missalocation reason as in using macroprudential policy to avoid boom and bust cycles?

- Final (and most relevant) question: Why do we keep on proposing the use of inefficent monetary policy instead of efficient fiscal policy? The

only reason why monetary policy has any role here, other than stabilizing prices, is that we are assuming away fiscal instruments that would be directly targeted at the distortions