Quantitative Easing and the price-liquidity trade-off

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Discussion

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- Very interesting paper.
- Why do I like it? Because it essentially looks at the liquidity trade-off effect of QE. The current theoretical literature has mostly focused on the portfolio rebalancing effects. The liquidity effects exist, mainly implicitly.

Summary

- The impact of asset purchases on market prices and liquidity.
- QE more effective in countries with a larger fraction of preferred habitat investors.
- Contrary to existing theoretical papers, this paper emphasizes more on the liquidity effects instead of the implied portfolio rebalancing effects.
- Liquidity effects of QE on bond markets bolder in countries with a lower fraction of preferred habitat investors.

Summary

- The model focuses on the interactions between demand and supply in bond markets.
- CB asset purchases modeled explicitly rather than as an exogenous shock.
- Prices depend on liquidity premium also.
- CB intervention affects prices & liquidity through two channels:
    1. Increases the number of buyers in the market when it starts selling bonds (Demand effect).
    2. Decreases the number of sellers when holding bonds in its balance sheet (Supply effect).

Summary

- The model looks at the three phases of QE
  1. Announcement.
  2. Mature intervention phase.
  3. Tapering.
- QE does not depend on the mass of preferred habitat investors necessarily.
- The mass of preferred habitat investors determines the size of the effects on prices and liquidity.
- Preferred habitat index.

Model

- Model with search frictions.
- Bond prices depend on search friction.
- Agents meet randomly with uniform probability.
- Continuum of six agents:
  1. High-type sellers.
  2. Low-type sellers.
  3. High-type buyers.
  4. CB.
  5. Preferred habitat investors.
  6. Outside investors.

Fixed measures of Investors-Key Results

- Central bank purchases increase prices of bonds.
  Given a fixed stock of bonds, CB purchases decrease the holdings of active sellers. A drop in the measure of sellers increases prices.

- Liquidity improves initially as CB increases demand for bonds, but worsens subsequently when it withdraws bonds off the market.
  Matching between sellers and buyers is easier which improves liquidity. Then as the CB holds bonds in its balance-sheet, the mass of sellers shrinks and liquidity declines..

Fixed measures of Investors-Key Results

- Larger increases in prices when the share of preferred habitat investors is higher. Same holds with a reduction in the supply of bonds following purchases.
- However, Liquidity improves when the mass of preferred habitat investors is low.
  Search frictions less binding. Few buyers but many sellers. CB purchases alleviate the friction.

Endogenous entry of buyers-Key Results

- Investors compare the value function from an outside option to the value function of a buyer.
- CB purchases raise the price of bonds, but this is partially muted by fluctuations in the measure of sellers and buyers.
- CB purchases crowd other buyers out.
  CB purchases increase prices and hence decrease the value of becoming a buyer. Effect on prices now weaker compared to fixed fraction of investors case.

Some Comments

- This is a very nice analysis for the EA.
- However, some important facts are ignored.
    1. Large asymmetries in EA. Fixed income investors in Core and Periphery behaved differently.
    2. Large outflows outside the EA.
    3. All agents in the model hold the same maturities.

Some Comments

4. Domestic rebalancing in EA has been way weaker than expected. This might have led to a smaller drop in yields than intended. But rebalancing strong towards assets outside the EA.

5. Some countries issued new debt counteracting partly the effects of QE.

6. Parameter θ. Maybe paying a bit more attention on this parameter, as it may act as a policy variable which can mitigate the negative liquidity effects of a large share of preferred habitat investors.

7. There is clear evidence that non-residents have been the majority of sellers of PSPP bonds to the Eurosystem, even more than anticipated at the start of the program, showing large capital outflows as soon as markets started anticipating the start of QE in the Euro Area.