Discussion of:
Euro Area Quantitative Easing in a Portfolio Balance Model with Heterogeneous Agents and Assets

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The question

- Develop a portfolio balance model to analyze the effect of ECB QE on financial assets returns.
- CB implemented QE at the ZLB with aim to impact on long-term rates.
- Underlying transmission mechanism not clear.
- This paper: quantitative assessment of portfolio balance channel.

The framework (1/2)

- Players: 2 domestic and 2 foreign investors (banks and funds); CB; underwriter agent.
- 2 asset portfolios: equity, bonds; currency. Domestic and foreign.
- Investors' preferences are represented by asset specific (portfolios or currency) risk aversion parameters in mean variance optimization.
- CB implements monetary policy thorough demand for assets.
- Underwriter supplies all shares that have matured or defaulted (plus inventories?).
- Expectations: mixed. Naive (EMH-consistent) for asset prices; PPP-reverting for exchange rate; adaptive for covariance of returns.

The framework (2/2)

- Model is calibrated to analyze ECB asset purchase program started in March 2015. Two regions: Eurozone and rest-of-the-world; two agents (banks and funds) per region. Two asset portfolios per region, representing bonds and equities.
- Model is solved numerically through an adaptive algorithm based on excess demands. Simulations run for 1000 periods (4 yrs) and averaged across 20 runs.

Main results

- Effects of QE on returns highly significant but small. Yield on EZ bonds decreases by 0.6 bps for 100 bn EUR of EZ bonds purchases. Equity returns decrease by 1.96 bps.
- Biggest price impact of ECB QE is on EZ equity portfolio, with increase of 0.26% per 100 bn EUR of EZ bonds purchases.
- EZ bond prices increase by 0.035% per 100 bn EZ bonds purchased.
- EUR predicted to depreciate by 0.0138% (but this depends crucially on calibration of expected convergence speed to PPP).

Comments (1/2)

- What is the driving mechanism behind the impact of ECB QE on returns?
- Why reduction in equity returns from QE on bonds? And with magnitude greater than reduction in bond returns.
- I would like to see effects (direct and indirect, through substitution) spelled out more clearly. Authors should fully exploit the rich framework they have devised.
- QE effects on returns and prices (except from EZ bonds) differ substantially (even in sign) across simulations. Not clear why. Needs investigation.

Comments (2/2)

- Treatment of expectations: consistency?
- Example: Euro expected to appreciate after ECB QE because of reversal to PPP. Realistic?
- Calibration of risk aversion parameters seems suspicious: see Table 3. Bonds: [23:1318]; equity: [16:719]; currency: [80-19,871]. Needs further attention.
- More in general: what does an asset specific risk aversion coefficient represent?
- What is the "inventory" of the underwriter (i.e., what are its outstanding shares)? More in general, what is its role? Keep supply constant?

Conclusions

- Interesting model, rich, able to quantify impact of QE on returns.
- At the moment, I don't have much confidence in quantitative results.