Designing QE in a fiscally sound monetary union

by Tilman Bletzinger and Leopold von Thadden

Discussion by Dominik Thaler (Bank of Spain)

Banque de France, November 9th 2018
What they do

- Set up a 2 country model of a monetary union
- With the portfolio balance channel

- They show that for small enough shocks that drive the economy to the ZLB QE can restore the un(ZLB)constrained allocation up to a first order
  - in a one country model
  - in a symmetric two country model, even with asymmetric shocks: with symmetric QE
  - in an asymmetric two country model: with asymmetric QE
The model (2 sym. countries = 1 country)

- Firms as in the 3 equation NKM

- Households hold bank deposits and money (money in the utility function)

- Competitive banks hold long and short term debt

- RDL \approx BLB + BSRL + BSBL + BSDS

  - average return on assets

- Banks face adjustment costs for deviating from a certain maturity structure (portfolio balance channel)

- RL1 period return on L T asset \approx RS + \nu (BLB + BS - \bar{BLB} + \bar{BS})

  - cost of deviation from optimal structure

- Conventional monetary policy controls RS \geq 1

- Unconventional monetary policy can affect RL due to the portfolio balance channel
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  - 1 period return on LT asset
  - short term rate
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Main result

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However \( R_L \) is the **1 period return on long term bonds**, not the **long term bond rate**! Hence \( R_L - R_S \) is not the **slope of the yield curve** but the **term premium** (\( YTM_L - R_S \) is)
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- However $R_L$ is the 1 period return on long term bonds, not the long term bond rate! Hence $R_L - R_S$ is not the slope of the yield curve but the term premium ($YTM_L - R_S$ is)
- $R_L > 1$ is a much weaker requirement then the yield curve being flat
- The range of shocks for which the propositions apply is smaller than the statement indicates
Comment 2: Conventional policy

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- We hence get $\frac{B_S}{B_L+B_S} \downarrow$ and $\frac{B_L}{B_L+B_S} \uparrow$.
- Hence even normal monetary policy “inadvertently” affects the term premium $R_L - R_S$, and through that the whole yield curve.
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- **One possible solution:**
  - Consider cashless limit and have banks hold interest bearing reserves.
  - Make reserves and short term bonds perfect substitutes as regards the portfolio preferences.

Arce, Nuno, Thaler, Thomas (2018) show that even if the term premium is not affected such money creation can affect interbank liquidity and hence rates.
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  - Can we ignore them in case of a large shock that brings the economy to the ZLB?
- The way the nonlinear model is set up the ZLB does not exist, because for $R_D = 1$ households would demand infinite amounts of money.
  - Solution: Change the utility function (or assume that the ZLB is positive as in Harrison, 2012).
Conclusion

- A great, easily readable paper
- The extension of the main result to the multi country setting provide a surprising insight that is useful when designing QE (the use of the capital key)