Schweizerisches Institut
für Banken und Finanzen

Universität St.Gallen

Regaining monetary policy effectiveness during the Corona crisis

Sebastian Lang and Wolfgang Schadner

AUSTRIAN WORKING GROUP ON BANKING AND FINANCE
35th Workshop, 27th November 2020, Graz (Austria)

Contribution: Measuring the impact of quantitative easing (QE) on interest rates and discussing strategies to regain monetary policy effectiveness during the Corona crisis

- **The economic crisis spurred by the Corona-Virus confronts central banks worldwide with new kinds of challenges**, as in many countries a complete stop in production due to lock downs of the economy meets enormous fiscal and monetary impulses to overcome the crisis.
- In Europe the situation is more than ever complicated, as a multitude of monetary policy **emergency measures implemented during the financial and European debt crisis of 2007 to 2012 are still in place**, such as negative interest rates and bond buying programs. Especially the bond buying programs have been intensified once more during the current Corona crisis.
- **Our contribution** is to summarize the monetary policy stance of the European Central Bank by **measuring the impact of quantitative easing (QE) on interest rates in selected Euro area countries and discussing possibilities of regaining monetary policy effectiveness by exiting from QE**.

The ECB´s response to the Corona crisis

- As of March 2020 the ECB enacted the "**Pandemic emergency purchase program (PEPP)**" as a temporary asset purchase program of private and public sector securities, which initially had an overall envelope of EUR 750 billion and was subsequently expanded **to EUR 1.35 trillion**.
- All asset categories eligible under the existing asset purchase program (APP) are also eligible under the new program to fight the Corona-crisis. **The duration of the PEPP was extended until at least June 2021 and the ECB is going to reinvest maturing securities until the end of the year 2022**.
- **Further measures** include an expanded range of eligible assets under the corporate sector purchase program (CSPP) – also a program enacted after the European debt crisis – and a relaxation of collateral standards for Eurosystem refinancing operations for commercial banks (MROs, LTROs, TLTROs).

As of September 2020 the stock of the PEPP was at EUR 543 billion, while the stock of Eurosystem APP bonds stood at EUR 2´940 billion.

Economic consequences of the ECB measures to fight the Corona crisis

- In response to the Corona crisis, the **ECB has dramatically increased its balance sheet** by buying various types of assets, which has also resulted in a strong increase of reserves that commercial banks hold at the ECB.
- **This increases broad money supply, which during normal times central banks only influence indirectly by affecting the interbank market interest rate**.
- Specifically, when the central bank buys assets from the nonbank private sector by means of the **APP and PEPP,** money supply in the Euro area increases, similar to when commercial banks provide credit.

In other words with QE, the central bank has a **direct quantity effect on the monetary base**.

Measuring the impact of quantitative easing on interest rates

- We use monetary analysis to **provide an equivalence between the crisis measures taken by central banks, such as quantitative easing (QE) and standard interest rate monetary policy** in the form of hypothetical negative interest rates.
- **We estimate of how much higher, relative to pre-QE, the interbank interest rate will have to be set during the exit for a given central bank´s balance sheet to obtain the desired monetary policy stance**, holding other parameters constant.
- In standard monetary policy terms this answers the question of **how many percentage points must be added to a standard Taylor rule interest rate for a given central bank´s balance sheet:**

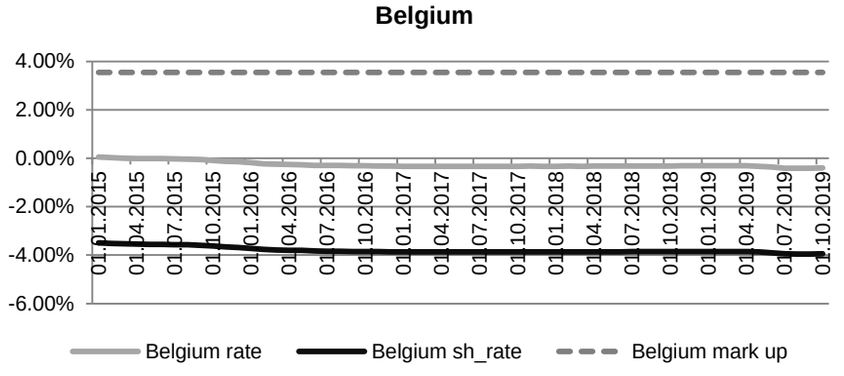
Taylor rule (1992) for the USA: $I=R^*+PI+0.5(PI-PI^*)+0.5(Y-Y^*)$

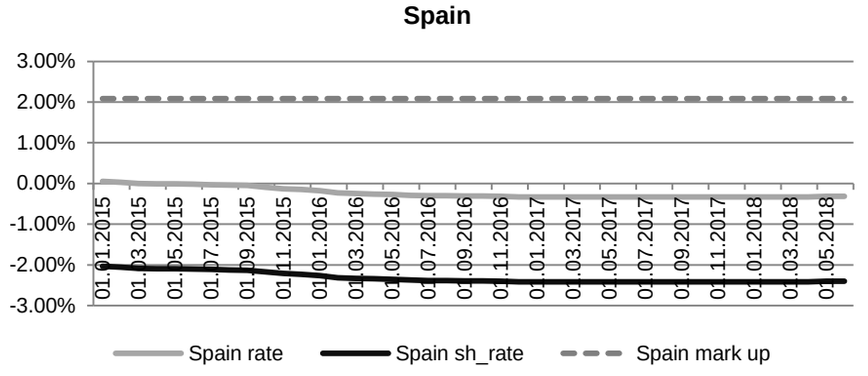
where:I=Nominal fed funds rate, R=Real federal funds rate (usually 2%), PI=Rate of inflation, PI*=Target inflation rate, Y=Logarithm of real output, Y*=Logarithm of potential output*

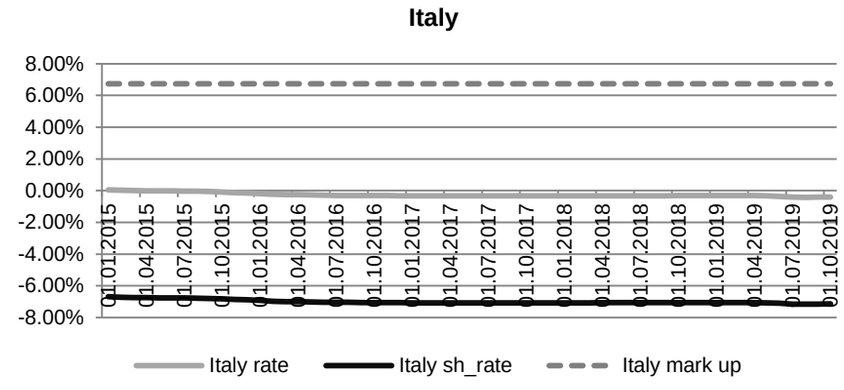
Quantification of the correspondence between QE and conventional monetary policy in the Euro area

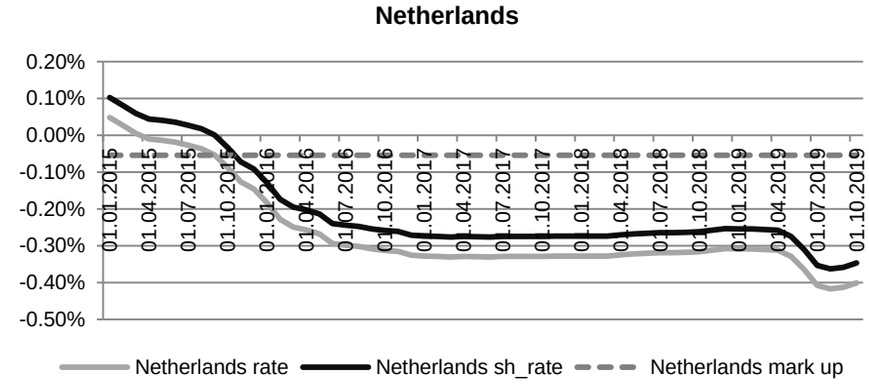
- To quantify this correspondence between QE and conventional monetary policy for selected countries in the Euro area, **we compare the effects of broad money supply shocks on GDP during QE to the effects of shocks to the interest rate on GDP in "normal times", i.e. pre-QE**.
- **We estimate a VAR model with standard variables**, which are usually included in monetary macro VAR models, i.e. the log levels of the price of industrial commodities (LCOMPI), the GDP price deflator (GDPDEFL), real GDP (LGDPR), M2M (LM2M), as well as the 3-month EURIBOR in percentage points.
- **Two estimation periods are considered**. The first sample covers the pre-QE time from March 1991 to December 2014. And a second sample since the beginning of QE, i.e. from January 2015 until December 2019.
- In order to compute the **hypothetical negative interest rate** corresponding to QE, the peak response of real GDP to money shocks in the QE sample is compared to the peak response of real GDP to interest rate shocks in the pre-crisis sample.
- This provides an **equivalence in terms of interest rate and money shock sizes** to produce a given GDP response.

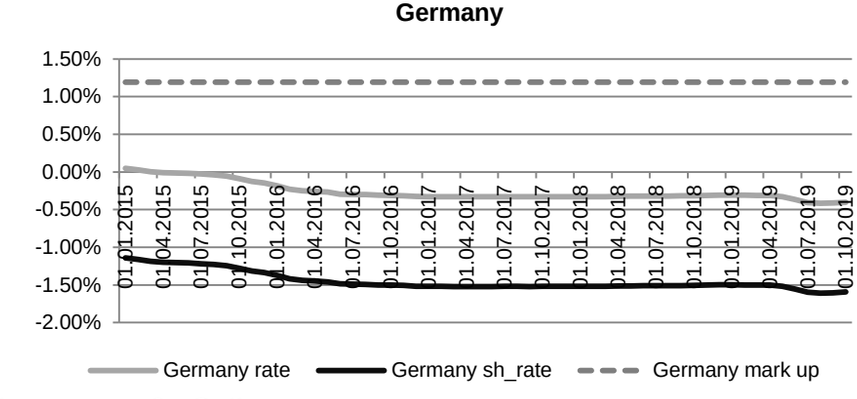
Preliminary results: Hypothetical negative interest rates corresponding to QE in selected Euro area countries

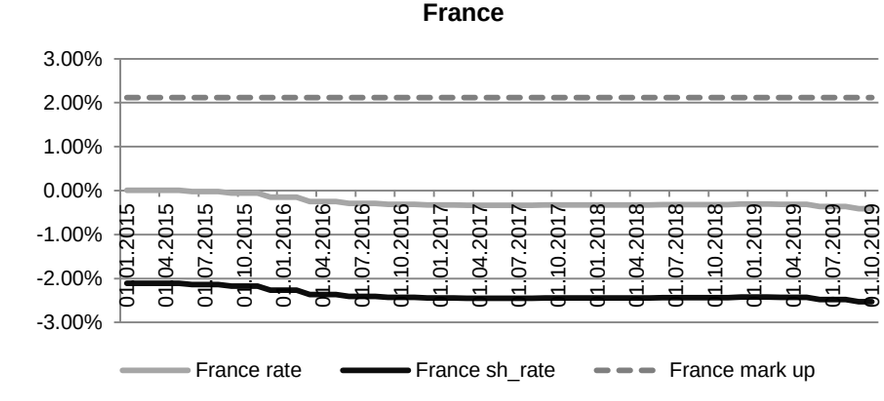












Universität St.Gallen

IMF Criteria for policy normalization in the Euro area

The IMF has characterized ideal policy normalization as follows:

Ideally, the normalization of interest rates and volatility would be orderly and unfold as follows:

1. ***short-term interest rate expectations rise*** *along a* ***smooth****, gentle path, consistent with current market expectations;*
2. *the* ***term premium compression unwinds gradually****;*
3. *the* ***portfolio adjustment response occurs smoothly****, and*
4. ***credit valuations reprice modestly****;*
5. ***leverage is unwound at a gradual pace****, with limited knock-on effects;*
6. ***market liquidity is sufficient*** *to accommodate these adjustments;*
7. *and all of these developments occur in the context of an* ***economy gathering strength****"*

IMF Global Financial Stability Report – Transition challenges to stability, October 2013.

Scenario 1: Fast recovery and pick up of inflation

- The optimistic outlook rests on the presumption that the bulk of the recession has been due to the lockdown, and that the extent and timeliness of the monetary and fiscal supports have limited the damages
  - Even in the most optimistic case of quick reabsorption of the pandemic shock, it is likely that the ECB will still be facing the pre-COVID fragile macroeconomic outlook that discouraged a resolute normalisation of monetary policy.
  - In this case, the QE program is likely to remain in the ECB's toolbox as part of a larger set of unconventional monetary policies, among which are also negative interest rates.
- If inflation does take hold, the ECB will face the trade-off between sustaining economic activity and preserving price stability
  - Two consequences: The first is the extra-large build-up of the monetary base in the Eurosystem needs to be unwound at a high speed. The second is the nexus between low interest rates and high public and private debts.

Consequence

The rise of interest rates to rein in inflation would make large fractions of outstanding debts unsustainable, with heavy negative repercussions on financial and economic stability. Hence this scenario may turn into a stagflationist one, that is a situation in which some inflation coexists with a depressed activity.

Scenario 2: Slow recovery and stagnation

- Supply-side forces may obstacle a quick and sustained recovery
  - Reopening will not find the same economy as the one before the lockdown: some of the locked down businesses may not survive (in spite of public aids), while the unlocked portion of the economy may bless some and damn others. The composition of final demand will be changed, thus leading to the shrinking of some sectors and the expansion of others. Relocation will take place on a large scale, in a vast and uncertain process of re-organisation of personal, economic, and financial networks
- Debt overhang may surely be one of the forces that hinder a fast recovery of economic activity
  - Under counterparty or market pressures, debtors' priority is not to spend but to save and repay debt, feeding "deleveraging" or "balance-sheet recessions". This situation creates a trade-off with debt restructuring. Pre-emptive debt restructuring may clear the stage for recovery, but if it is enacted too fast and too early it may lead to the a recession as in 2011/12.

Consequence

Even though macroeconomic concerns may fully justify the continuation of QE programmes in the euro area, the political economy of such interventions will likely become more complicated, because of the risks and the implicit fiscal transfers that they entail, with limited conditionality.

Scenario 3: The „worst case“ scenario

- The ECB will face even more demanding challenges compared to those faced by other central banks, due to the fact that its jurisdiction is characterised by **deep structural disparities**
  - Asymmetrical recovery, with growth in the euro area’s most vulnerable countries lagging behind that in the core countries, and the necessity to start tapering after the end of the Corona crisis.
- A **confidence crisis** concerning the public debt sustainability of one or more euro area countries becomes possible, with a flight to safety and risk of contagion
  - Particularly if it will be evident that in these countries the political conditions for a fiscal consolidation and the implementation of effective growth-enhancing reforms are missing.

Consequence

The ECB faces the choice of whether to support the debt of the countries in trouble, through purchases of their government bonds well beyond what the capital key prescribes or to expose the euro area to a crisis that might lead to its implosion.

Conclusion

- The **crisis of the European Monetary Union is still not settled to this date** and has revealed different flaws in the construction of the Euro.
- As a result, the **ECB´s monetary policy and emergency measures are the main public supporting instruments during the Corona crisis.**
- **In the aftermath of the Corona crisis further political progress** is needed in reducing and sharing risks in the Euro area, such as the reduction of banks´ exposures to domestic sovereign bonds.
- Such progress may not be sufficient, however, for national fiscal policies and monetary policy to smooth this major crisis.
- Hence, the introduction of common fiscal stabilization capacities is necessary to reinforce the euro area both at the country level and Euro area level.
- **Combining a fiscal stabilization capacity with a stepwise reduction of the asset purchase programs could give the ECB room to raise interest rates in the medium term, break free of quantitative easing and normalize monetary policy in the euro area.**

Literature

Beck, G., Wieland V. (2017): How to Normalize Monetary Policy in the Euro Area, Institute for Monetary and Financial Stability Working Paper, Goethe University Frankfurt.

Bonatti, L. Fracasso A., Tamborini, R. (2020): COVID 19 and the Future of Quantitative Easing in the Euro Area: Three Scenarios with a Trilemma, European Parliament Policy Department for Economic, Scientific and Quality of Life Policies Directorate-General for Internal Policies.

Clemens, M, Gebauer, St., Rieth, M. (2017): Early exit from ECB bond purchase program could reduce GDP growth and inflation, DIW Economic Bulletin.

Hayashi, F., Koeda, J. (2019): Exiting from quantitative easing, Quantitative Economics 10, 1069-1107.

IMF Global Financial Stability Report – Transition challenges to stability, October 2013.

Issing, O. (2020): Encompassing monetary policy strategy review, SAFE White Paper No. 68, Leibniz Institute for Financial Research SAFE.

Karadi, P., Nakov, A. (2020): Effectiveness and Addictiveness of Quantitative Easing, Directorate General Research, European Central Bank.

Pisani-Ferry, J. (2012): „The known unknowns and unknown unknowns of EMU“, Bruegel Policy Contribution.

Reynard, S. (2018): Negative Interest Rate, QE and Exit, SNB Working Papers.

Wälti, S. (2012): Trust no more? The impact of the crisis on citizens´trust in central banks, Journal of International Money and Finance 31, 593-605.

Wen, Y. (2014): When and How to Exit Quantitative Easing?, Federal Reserve Bank of St. Louis Review 96, 243-65.