

EXECUTIVE SUMMARY

PROBLEM STATEMENT

Since the last decade, central banks have been introducing several non-standard monetary policy measurements, so called unconventional monetary policies. Such policies intend to directly intervene in financial markets by large-scale asset purchase programmes as well as liquidity provisions in dysfunctional markets. The four major players which were conducting such unconventional monetary policies were the Federal Reserve of the United States [FED], the Bank of England, the Bank of Japan and the European Central Bank [ECB]. Considering that the ECB's main goal behind the mentioned unconventional monetary policies was to reduce money market tensions and yield spreads in the covered and sovereign bond market (ECB 2009a). During the same period, on September 2011, the Swiss National Bank [SNB] announced to peg the Swiss franc to the Euro because of an appreciating Swiss franc causing domestic economic losses in Switzerland. Beside the macroeconomic impacts of the said monetary policies, the balance sheets of the SNB as well as the ECB literally have been "exploding" since the beginning of the financial crisis in 2008/2009. The ECB's amount of total assets increased from €1508 billion in 2007 to €3661 billion in 2016 whereas the SNB's balance sheet rose from CHF 127 billion in 2007 to CHF 747 billion in 2016. Prior studies (see e.g. Bernhard and Ebner 2016, Fratzscher et al. 2014, Krishnamurthy et al. 2015 or Szczerbowicz 2015) have found that the ECB's mentioned unconventional monetary policies in the said period not only influenced financial market conditions in the EU, but also caused spill in neighbouring countries.

In a preliminary part of this work, existing scientific papers will provide a theoretical explanation about the implications of monetary policy measures under fixed and floating exchange rates and discuss empirical results of prior research. This study's goal is to reveal the existence and impact of international spillover effects of the above mentioned monetary policies by the ECB on the Swiss financial market and additionally analyse if the fixed EUR/CHF exchange rate regime introduced by the SNB influenced the effectiveness of these measurements. Therefore, the main unconventional monetary policies of the ECB as well as the currency peg of the Swiss franc against the German mark and the Euro will be characterized within this work. Furthermore, an event-base regression model is conducted to quantify the impact of the ECB's and SNB's non-standard monetary policy activities on Swiss equity and sovereign bond prices as well as government bond yields.

METHODOLOGY

The scientific testing presented within this paper is based on the Swiss Market Index including dividend payments [SMIC] and the Swiss government Bond Index [SBI government] during the period of 2008 to 2016. By dint of an event-based regression model, in which the dependent variable is (i) the daily returns of the SMIC, (ii) the daily returns of the SBI government and (iii) the daily variation of the SBI government's yields, it will be analysed how strong the announcements of several unconventional monetary policies by the ECB affected the Swiss financial market. In addition to the dummy variables related to ECB announcements, a benchmark and a dummy for exceptional market events to measure normal market conditions, a dummy to capture the impact of the sovereign debt and the financial crisis and a dummy for the SNB's currency peg are added to the before mentioned model. To picture market conditions as impartial as possible, the MSCI World and the Citi Group's World Government Bond Index [WGBI], both excluding European countries, have been chosen as benchmarks.

For the event dummies within the said model, different constructions have been tested to achieve the best possible results. The event windows, which contain the event dates differentiate between only the announcement day, the announcement day and the day after the announcement and the announcement day, the day before and after the announcement day.

RESULTS

The Swiss financial market indeed is found to be likely to react to unconventional monetary policy decisions by the ECB. Out of all announced and analysed measurements, only the Securities Market Programme [SMP], the Covered Bond Purchase Programme [CBPP] and the Outright Monetary Transaction [OMT] affected Swiss equities and bonds on a statistically significant level within this work's data sample and observed period of time. The SMP increased Swiss equity prices and sovereign bond yields by 2.32 percent and ten basis points respectively and decreased government bonds by 56 basis points. The CBPP led to a decrease of the SMIC as well as of the SBI government of 1.35 percent and 46 basis points, respectively, but increased sovereign bond yields by eight basis points. The OMT had showed very similar impacts on the Swiss financial market as the SMP, but with weaker effects. The OMT rose equity prices by 93 basis points and sovereign bond yields by four basis points and decreased government bond prices by 39 basis points.

The introduction and the abolishment of the SNB's minimum exchange floor differently affected Swiss equity and bonds. Whereas the SMIC negatively reacted to the announcements, the sovereign bond market tended to improve in the observed time period. In addition, it appears that the currency peg had a restraining impact on the daily variation of equity prices as well as on sovereign bond prices and yields. One the one hand, considering the daily returns of the indices over time, it is obvious that after the introduction of the fixed EUR/CHF exchange rate, the SMIC and the SBI government less fluctuated than before. On the other hand, two very similar programmes, namely the SMP and the OMT, affected the Swiss financial market differently. The SMP, which was announced before the currency peg, influenced the SMIC as well as the SBI government much stronger than the OMT, which was announced during the fixed exchange rate regime. Nevertheless, the latter should be handled with care. Although both the programmes intended to buy sovereign bonds, they distinguished in one main criteria: while the SMP intended to buy longer-term sovereign bonds, the OMT focused on short-term sovereign bonds. Beside the exchange rate regime, this reason could explain the different results.

EVALUATION

An internationally linked country such as Switzerland with a high degree of dependency on the economic area of the European Union, it is probably inescapable to being influenced by monetary policy decisions of the ECB. How strong and effective these international spillover effects are, however, depends on (i) the specific programme's aim and extent and (ii) most likely on the monetary policy cooperation between the central banks themselves. However, the respective consequences of the committed unconventional monetary policies on the Swiss financial market were not devastating as found within this work's empirical analysis, but considering future developments within this field, it is important to recognize the dimension of international spillover effects and therefore know how to react properly to them.

For further research, it would be of interest to analyse international spillover effects of unconventional monetary policies on the Swiss financial market more in detail. To do so, the SMIC could be split in different industries and the SBI government in several groups with different maturities. Following this study's results, corporate bonds potentially reacted to the ECB's observed policy measurements too. In addition, announcements of central banks probably not only affect prices and yields but also influenced the respective investors risk aversion. A feasible approach would be to analyse the variance or the standard deviation of different asset classes to gain information about different transmission channels of international spillover effects. Heavily fluctuating asset prices could be a sign of such unconventional monetary policy spillover which could, for example, be described by their variance or the standard deviation.