The W&P Perspective: The SNB's negative interest rates – How much longer?

In 2015, the Swiss National Bank introduced negative interest rates. The lower interest rates in Switzerland should have increasingly led investors to pursue other currencies, thereby serving to weaken the Swiss franc. The academic literature has always doubted the impact of interest rate differentials on exchange rates. Data from Switzerland affirms this scepticism. // Adriel Jost and Klaus W. Wellershoff

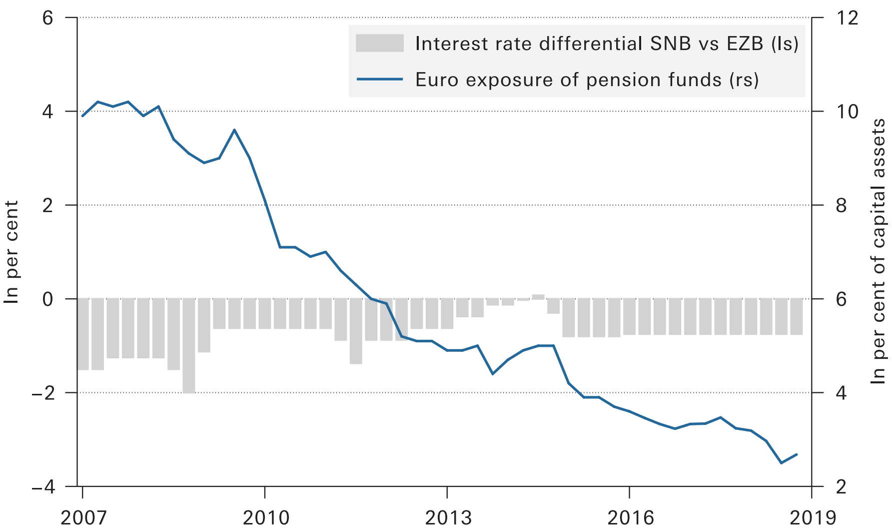
Since January 2015, the SNB has levied a negative interest rate on the current accounts of Swiss banks. The stated aim of this measure is to reduce the attractiveness of Swiss franc investments and thereby weaken the Swiss currency. The underlying reasoning is simple. The greater the interest rate differential between Switzerland and other countries, the more attractive investors should find those other currencies, such as the euro. If investors, seeing these higher return opportunities, shift their portfolios away from franc positions and into other currencies, demand for the franc should fall.

What the literature says

The classic theoretical literature on the relationship between the interest rate differential and the exchange rate, however, presents a more complex picture. It states that a currency area with low and stable inflation has lower interest rates, but its currency nevertheless should tend to appreciate. Investors are thus compensated for the lower interest rates with currency gains ("uncovered interest parity"). A widening of the interest rate differential leads to depreciation of the currency with falling interest rates. But this enlarged interest rate differential is then compensated for by currency appreciation (Rudi Dornbusch's "overshooting model").

Empirical literature, in turn, provides no clear evidence on this topic. Successful wagers on currency movements can make a lot of money. Accordingly, intensive research has been conducted around the world

Fig. 1: Euro exposure of Swiss pension funds



On the right axis, Fig. 1 shows the average proportion of the investment portfolio that Swiss pension funds hold unhedged in euro-denominated investments (euro exposure). The left axis shows the interest differential between Switzerland and the Eurozone. Since the introduction of the negative interest rate at the end of 2014, the euro exposure of Swiss pension funds has fallen, with only brief interruptions.

Source: Credit Suisse, Thomson Reuters Datastream, Wellershoff & Partners on how exchange rate movements can be explained. The results are sobering. In the short term, the so-called "random walk" delivers the best results.[1] The one bright spot is a balance based on purchasing power parity. Over the long term, a nominal exchange rate moves close to this equilibrium, which itself changes due to the inflation differential between the two currency areas. The interest differential itself, however, does not seem to be useful in explaining either short- or long-term exchange rate movements.

Evidence in Switzerland

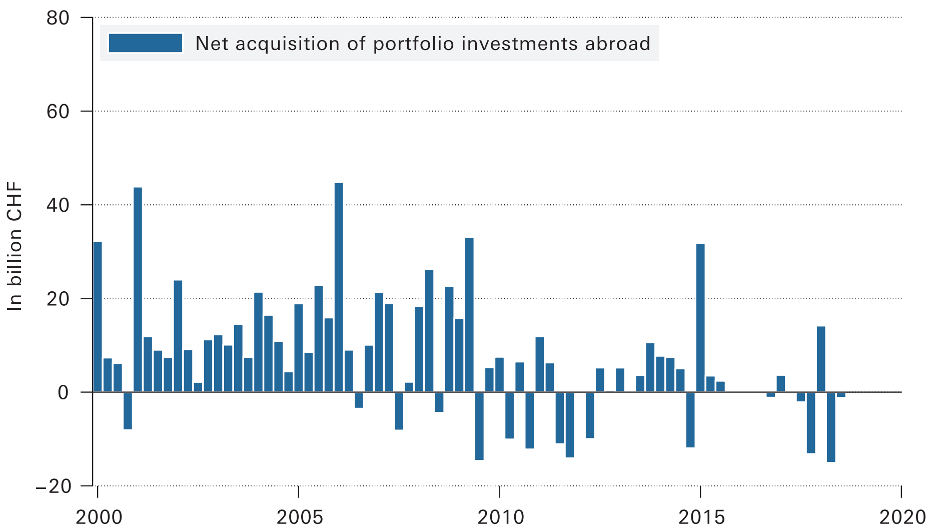
The introduction of the negative interest rate in Switzerland four years ago offers an opportunity to verify whether investors are increasingly investing abroad and thus, at least theoretically, possibly exerting an influence on the exchange rate. For one thing, data on the investment behaviour of pension funds is available. Fig. 1 shows the average share of investment portfolios held by Swiss pension funds in unhedged euro-denominated investments, and the interest rate differential between Switzerland and the Eurozone based on the difference between the SNB's key interest rate and that of the European Central Bank. If the SNB's hypothesis about negative interest rates is correct, the percentage of euro-denominated assets should increase as the interest rate differential increases.

As can be seen in the chart, the development hoped for by the SNB has not materialised. On the contrary, since the introduction of the negative interest rate at the end of 2014, Swiss pension funds have invested less and less in euro investments. In the final quarter of 2018, the euro share, at around 2.7 per cent, was only just above the zero bound. At the same time, the proportion of Swiss franc investments has moved sideways. Swiss pension funds have not only invested less in the euro; after hedging, they have also kept their total foreign currency exposure at approximately the same level. The interest rate differential has therefore not led to any increased unhedged involvement of the pension funds in investments outside the euro. This in turn likely means that the desired weakening of the Swiss franc due to the negative interest rate has not transpired, at least through the pension funds.

These results correspond with our own anecdotal evidence. The appreciation of the franc in 2015 would have actually spoken in favour of an increased share of euro investments in pension funds' portfolios. The strong overvaluation measured by purchasing power parity at that time led one to expect currency gains, which subsequently also occurred on euro investments.

1 Obstfeld & Rogoff (2001) call this fact the "exchange rate disconnect puzzle" because exchange rates seem to be independent of other economic data.

Fig. 2: Portfolio investments abroad



Portfolio investment includes cross-border purchases and sales of equity securities and debt instruments. The graph shows investments by investors domiciled in Switzerland in securities issued by foreign issuers. Until 2009, the annual net amounts were always positive. Since 2010 this is no longer the case. The introduction of the negative interest rate in 2015 also did not lead to more investments abroad.

Source: SNB, Wellershoff & Partners

Swiss pension funds were very sceptical about this idea. In their assessment, the concern about a further appreciation of the franc outweighed both the fundamentally justifiable hope for currency gains as well as a modest excess return through the interest rate differential. Ironically, the SNB itself probably contributed to this behaviour by the pension funds. For years it had warned of the political and economic risks in the Eurozone. This assessment of the Swiss franc's appreciation potential hardly went unnoticed by the pension funds.

A second source of data on investor behaviour comes from cross-border portfolio investments, which are published in connection with balance of payments statistics. This data also offers no evidence of the effect of the negative interest. Fig. 2 shows that until the financial crisis in 2009, Swiss investors bought more securities abroad than they sold. On average, since 2010, this is much less the case. The introduction of the negative interest rate at the beginning of 2015 did not reverse the trend. Foreign investments made by the Swiss population surged only briefly in the first quarter of 2015. However, this did not reflect a change in investor behaviour, but rather, following the appreciation of the Swiss franc in January 2015, the compulsory rebalancing of positions, as mandated in the investment regulations of many fund managers and other institutional investors, back to their strategic values.

How much longer will the SNB stay with the negative interest rate?

The figures we have presented here provide no evidence of the hoped-for influence of the SNB's negative interest rate. It turns out that other factors, such as changes in preferences due to revised risk assessments, have a greater impact on investor behaviour. Based on this data, therefore, no influence of the negative interest rate on the exchange rate can be expected, which also corresponds to the findings in the academic literature. It is therefore not surprising that even though the SNB itself emphasises the effectiveness of negative interest rates, it has yet to present any supporting empirical evidence for that view.

Of course, the assertion that without negative interest rates the franc would have been subjected to even more pressure cannot be refuted. Counterfactual narratives are never falsifiable. However, the euro portion of pension funds' investments could have hardly diminished more than it did after the introduction of negative interest rates, since it was already close to zero.

The SNB's emphasis on interest rate differentials must also be seen in the context of all its communications. In fact, the SNB appears to be using its communications as a tool to achieve its monetary policy objectives – in particular, to weaken the franc – without actually having to intervene in the foreign exchange markets. It can therefore be assumed that the SNB over- rather than under-emphasises the importance of interest rate differentials.

However, this one-sided emphasis on the effectiveness of negative interest rates also comes with risks. The Swedish central bank raised interest rates in December without visibly influencing the exchange rate. However, just a small change in the SNB's communications would likely increase upward pressure on the franc in the short term already, given the SNB's current focus on interest rate differentials in its communications. Thus, there is a risk that the SNB will wait too long to raise interest rates in order to avoid creating such upward pressure. This reticence to hike rates can ultimately be seen as a monetary policy consequence of their communications strategy. Monetary policy would in effect follow the lead of communications policy, and not vice versa.

Given its solid growth, full employment and inflation rates near targets, the Swiss economy could even cope with some franc appreciation. Also, the SNB can only create additional leeway for the next recession if it soon starts raising interest rates. At the same time, the side effects of the negative interest rate are becoming increasingly apparent to Swiss savers and investors. The risks resulting from imbalances in the real estate and mortgage markets also continue to be emphasised by the SNB. It would not be surprising, therefore, if the SNB soon concludes that the cost of the negative interest rate now exceeds its benefits.

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