John Schindler August 5, 2010

The Swiss National Bank's Three-month Libor Target

Since the beginning of 2000, the Swiss National Bank (SNB) has used a range for the three-month Swiss franc Libor as its announced target for monetary policy. The SNB's current target range is 0 to 0.75 percent and is shown by the blue lines in the top panel of the first exhibit. The SNB also indicates where within the range it will attempt to guide the three-month rate; the current point target is 0.25 percent, as shown by the dashed red line. As seen in the exhibit, three-month Swiss franc Libor has almost always remained within its target bands and, at least until the eruption of the global financial crisis, has typically been very close to the point target.

Although the SNB targets the three-month rate, it does not inject or drain three-month funds in its monetary policy operations. Instead, the SNB normally conducts fixed-rate repo operations on a daily basis and almost always at a maturity of one week or less, with one-week repos the most common. The one-week repo rate is shown as the red line in the lower panel. The SNB generally decides on the maturity of repo transactions in such a way that the banking sector has to obtain liquidity through those transactions on a daily basis to fulfill its payment and minimum reserve obligations. This demand for liquidity from the banking sector helps the SNB to influence money market rates.¹

The SNB also has a standing lending facility that provides overnight financing to eligible banks at a penalty rate to help reinforce the upper end of its target band. The SNB, however, does not have a standing deposit facility to reinforce the lower end of the band, though it is authorized to create such a facility.

Before 2000, the Swiss National Bank officially targeted monetary aggregates, using a medium-term target for the seasonally-adjusted monetary base. The SNB primarily used foreign exchange swaps to affect the monetary base. In 2000, the SNB adopted an explicit definition of price stability (an annual inflation rate below 2 percent) and announced that it would rely on a conditional inflation forecast to guide policy decisions. To achieve its inflation goals, the SNB switched its intermediate target from the monetary base to three-month Libor. This was reportedly chosen because it is the main reference rate to which the pricing of Swiss franc credit is linked, including many mortgages. Moreover, the Swiss domestic repo market was not (and is not) sufficiently developed and lacks the liquidity to support operations in very short maturities, such as overnight.

¹ This memo describes how the SNB conducts monetary policy during normal periods. In recent months, however, intervention in the foreign exchange market to weaken the Swiss franc against the euro resulted in excess liquidity in the Swiss money market. Consequently, the SNB has not been conducting short-term repos to inject liquidity into the market but rather has been selling short-term bills to withdraw liquidity.

² While the targeting of monetary aggregates was the official Swiss policy, debate swirled around whether the SNB also placed significant weight on keeping the exchange rate from trending and putting significant upward or downward pressure on inflation.

Impact of the SNB's Targeting Regime on Market Rates

Evaluating the effectiveness of using a three-month interest rate as the primary monetary policy target is difficult, but the following briefly presents a few simple comparisons that suggest that the Swiss have not performed significantly better or worse than the Federal Reserve in hitting its target rate or in influencing longer-term borrowing rates in the economy.

First, the SNB has been able to keep the three-month Libor rate relatively close to its target, as can be seen in the upper panel of exhibit 1. Because the SNB has a target range, when the actual rate drifts above or below the point target, the SNB does not have to act immediately to return the rate to the point target. This, in part, explains the deviation of the Swiss franc Libor rate from the point target during the financial crisis. Despite the flexibility provided by a target range, the actual variability of the three-month Swiss franc Libor rate around its point target, as measured by the variance of the deviations from the target, is statistically indistinguishable from the variation of the federal funds rate around its target over the past decade. However, as can be seen in the upper and lower panels of exhibit 2, the deviation of three-month Swiss franc Libor rates from the point target have tended to be serially correlated throughout the past decade, whereas the deviations of the federal funds rate from its target appear to have been more random.

Second, the SNB's decision to target a three-month rate has not necessarily led to a different relationship between shorter-term rates and three-month rates than is observed in the United States. As shown in Table 1, the variation in the gap between the very short-term rate and the three-month rate is similar to the gap observed in the United States. The standard deviation of the gap between one-week rates and three-month Libor in Swiss francs and in U.S. dollars has been identical since 2000. The gap between the overnight rate and three-month Libor is less volatile for the Swiss franc rates, but the difference is small and is sensitive to the sample period.

Table 1: Standard Deviations of Gap between 3-mo. Libor and shorter-term rates (2000-present)

	3-mo. Libor – 1-week rate ¹	3-mo. Libor – Overnight rate ²
Swiss franc	0.28	0.36
U.S. dollar	0.28	0.43

¹ For the Swiss franc, the one-week rate is the repo rate. For the U.S. dollar, it is the one-week Libor.

A third consideration is whether movements in the target rate affect the longer-term rates that are more relevant to borrowing and spending decisions. While we cannot establish the direction of causality, the correlations between policy rates and 5-year government bond rates for Switzerland and the United States are identical over the past decade (0.88), suggesting that the

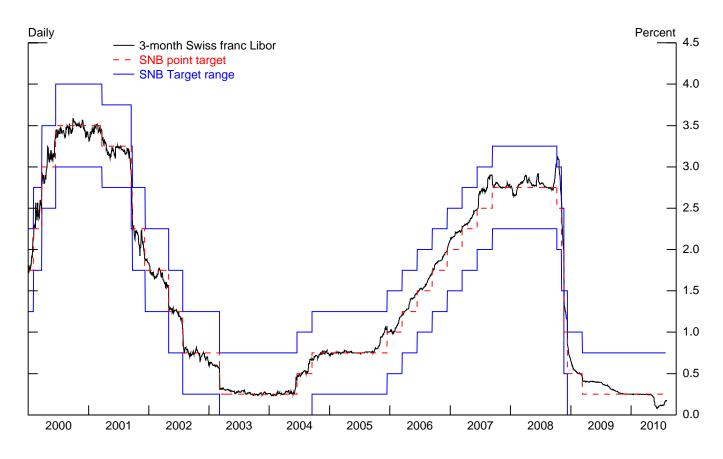
² For the Swiss franc, this is the Swiss Average Rate Overnight or SARON. For the U.S. dollar, this is the federal funds effective rate.

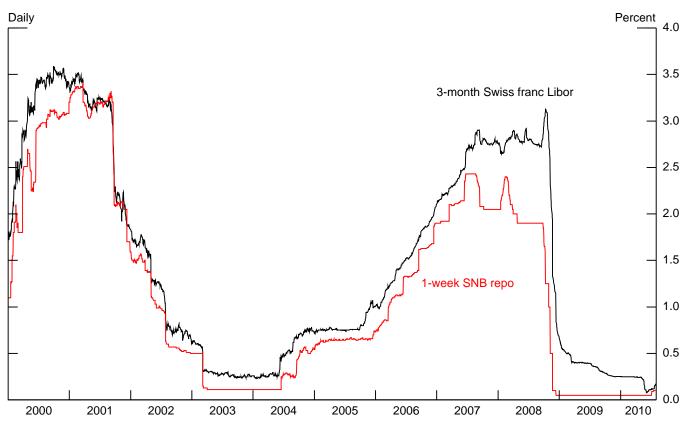
³ This result holds also for a variety of subsamples. A notable exception is the period from August 2007 through December 2008, during which the variability of the federal funds rate around its target increases significantly relative to the variability of the Swiss franc Libor rate around its target.

SNB's ability to influence longer-term rates may be no different from the FOMC's ability to do so.

Exhibit 1

Swiss Monetary Policy Variables





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Exhibit 2

Deviations from Targets

