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What is the pass-through of the SNB policy rate to Swiss franc short-term interest rates?

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Short-term interest rates in Swiss francs are key to the transmission of the SNB's monetary policy to the broader economy. In this note, we examine how changes in the SNB policy rate since 2022—the start of a rate hiking cycle—have passed through to these domestic rates. We introduce the Pass-Through Index, a composite measure that combines the most important short-term rates. The index allows us to track how closely short-term rates follow the SNB policy rate. We show that the pass-through was effective overall in the period under consideration.

Short-term interest rates in Swiss francs are important for the transmission of the Swiss National Bank's (SNB) monetary policy to the broader economy. Short-term rates affect longer-term rates, asset prices and exchange rates, all of which in turn influence the decisions of businesses and households. When its monetary policy is implemented, the SNB aims at steering short-term interest rates in the secured money market—in particular, the Swiss Average Rate Overnight (SARON)—close to the announced SNB policy rate. However, interest rates in other money market segments, such as the unsecured market and the foreign exchange (FX) swap market, are also relevant, not least because they affect banks' funding conditions and thus the pricing of financial products.

In this SNB Economic Note, we provide information on the effectiveness of the SNB's monetary policy implementation by conducting an empirical analysis. First, we discuss how changes in the SNB policy rate have transmitted to SARON and other short-term rates since 2022, the beginning of a rate-hiking cycle. Second, we present the Pass-Through Index (PTI), which measures how closely short-term rates have tracked the SNB policy rate.

Steering short-term interest rates close to the SNB policy rate

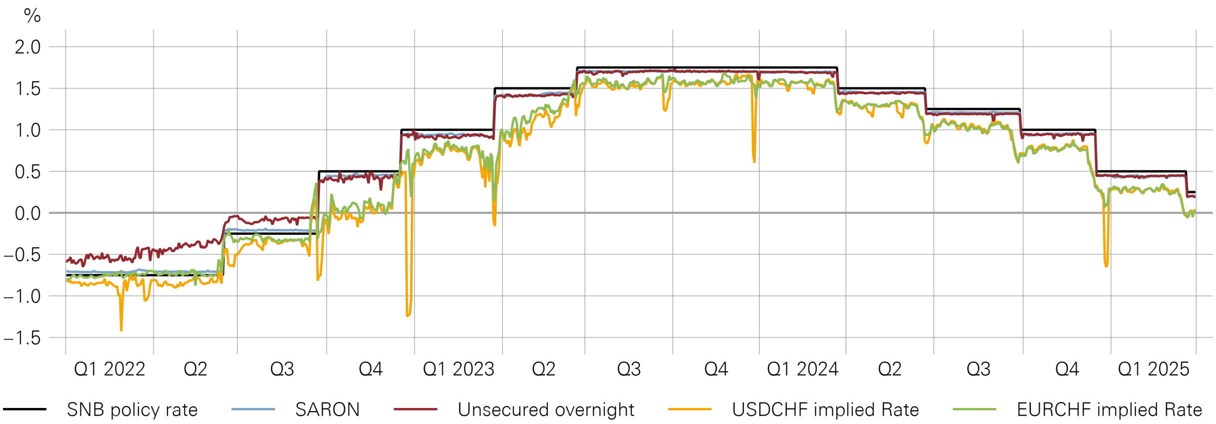
SARON and other short-term rates represent prices at which banks are willing to borrow or lend reserves. These rates are influenced by the demand for and the supply of reserves. Banks demand reserves for several reasons: to settle transactions, to fulfil regulatory requirements, to hold precautionary liquidity buffers or to earn the interest paid on reserves. The SNB remunerates reserves, which influences the demand for reserves.[1] In addition, the SNB conducts open market operations (OMOs), namely, SNB reverse repos and SNB Bills, to maintain an adequate supply of reserves (Maechler and Moser, 2022, and Moser, 2023).

While the SNB implements its monetary policy in the *secured* money market, it also monitors the pass-through to rates in other segments. In the absence of frictions, these other rates should trade closely to the SNB policy rate due to arbitrage (see Afonso, Biesenbach und Eisenbach, 2022). However, frictions can arise, for example, due to restricted market access and regulatory changes. These can lead to rate divergence across market segments as well as deviations from the central bank's target rate (Corradin et al., 2020, and Schnabel, 2020).

Measuring the pass-through around monetary policy announcements

We assess how money market rates have behaved since 2022, with a focus on SNB policy days. This is illustrated in Chart 1, which plots the SNB policy rate together with other money market rates. The policy rate was negative until the second hike in September 2022. The SNB further raised its policy rate, reaching a peak of 1.75% in June 2023. The SNB then started to ease monetary policy in March 2024. Additional rate cuts followed in June, September, and December 2024 as well as March 2025. Between January 2022 and March 2025, the SNB accordingly raised its policy rate five times (once by 25 basis points (bps), three times by 50 bps, and once by 75 bps) and lowered it five times (four times by 25 bps and once by 50 bps).

CHART 1: EVOLUTION OF SWISS FRANC MONEY MARKET INTEREST RATES SINCE 2022



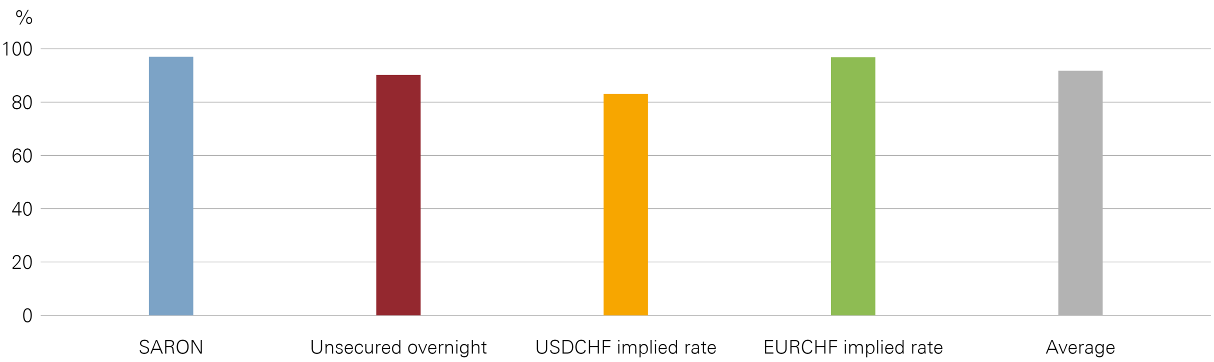
Source(s): Bloomberg, Gottex Brokers, Instimatch, SNB

[1] The SNB applies a tiered remuneration of reserves. Reserves up to an institute-specific threshold are remunerated at an interest rate that equals the SNB policy rate, and reserves above the threshold are remunerated at an interest rate that equals the SNB policy rate minus a discount of 50 basis points. Financial institutes therefore have an incentive to demand reserves in the amount of their threshold.

We measure the pass-through via the rates of the most liquid, short-dated tenors in different segments. Specifically, as illustrated in Chart 1, we consider the overnight secured rate (*SARON*), an overnight unsecured rate (*unsecured overnight*) derived from broker data, and the rates implied by one-week USDCHF and EURCHF swaps (*USDCHF and EURCHF implied rates*).[2] We correct the two swap implied rates for the term structure, which is notably influenced by market participants' expectations of future SNB policy rate changes. Like in Duffie and Krishnamurthy (2016), we refer to the corrected rates as overnight-equivalent rates.

First, we compare the levels of those rates in the five business days before and after any SNB policy rate change. This gives us a first impression of how well SNB policy rate changes have passed through right after monetary policy assessments. To do so, Chart 2 shows the average (over all SNB policy rate changes since 2022) difference in the pre and post levels, expressed as a proportion of the respective SNB policy rate change. The result is reported for each rate segment as well as for the resulting effect across segments (*Average* in Chart 2). The closer this proportion is to 100%, the more complete the pass-through is.

CHART 2: PASS-THROUGH OF POLICY RATE CHANGES



Note: For each interest rate segment, the chart shows the change in the averaged rate (over five business days) before and after the policy rate change. This is expressed as a proportion of the policy rate change, and is then averaged across all policy rate changes since 2022. The "Average" pass-through figure represents the equal-weighted average of the pass-through figures of all individual interest rates.

Source(s): Bloomberg, Gottex Brokers, Instimatch, SNB

The pass-through varies across rate segments. In Chart 2, the pass-through is highest for the SARON and the EURCHF implied rate, whereas it is lower for the unsecured overnight rate and the USDCHF implied rate. We propose three explanations for these variations. First, and importantly, the pass-through of SNB policy rate changes to the SNB's operational target SARON can be considered complete. This is unsurprising since the SNB actively conducts OMOs in the secured money market. Second, the less complete pass-through to some of the other rates can be explained by frictions that prevent participants from arbitrating differences across segments. One such friction is that some participants do not have access to all the segments. Third, month-end dynamics in the FX swap market—which can coincide with SNB

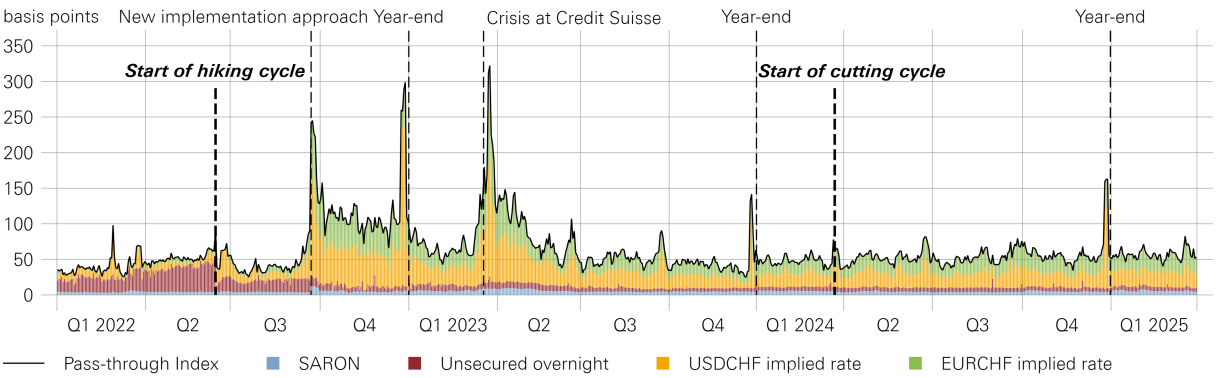
[2] Interest rates implied by FX swaps are derived under the assumption that the covered interest rate parity holds (cf. Borio et al., 2016). These rates reflect the return of domestic currency being converted to foreign currency for a limited time and invested at prevailing interest rates.

policy days—can imply a less complete pass-through for the USDCHF implied rate. This rate is often subject to downward pressure at the end of the month, which is arguably due to increased demand for US dollars in the FX swap market on dates that are important for banks from a regulatory perspective (cf. Kloks et al., 2024).

Measuring the pass-through via a composite measure

We measure the pass-through by using a composite measure that combines the rates discussed above. The so-called Pass-through Index (PTI) is the sum of the deviations (in absolute value) of these relevant rates (on an overnight-equivalent basis) from the SNB policy rate. A lower (higher) PTI indicates more (less) effective monetary policy implementation, as money market rates are more (less) aligned with the SNB policy rate. Chart 3 shows the evolution of the PTI between January 2022 and March 2025, together with the individual rate contributions.

CHART 3: PASS-THROUGH INDEX AND ITS CONTRIBUTIONS



Note: A lower (higher) PTI indicates a more (less) effective monetary policy implementation, as money market interest rates are more (less) aligned with the SNB policy rate.
Source(s): Bloomberg, Gottex Brokers, Instimatch, SNB

Since the start of the 2022 rate hiking cycle, the PTI overall has remained at similar levels as those observed before, although the index has increased temporarily at times. When transitioning to a positive SNB policy rate in September 2022, the SNB changed its implementation approach. The new approach relies on two levers: the tiered remuneration of reserves and the absorption of reserves by way of OMOs. For the SNB, an effective implementation relies on the absorption of sufficient reserves in the money market. This is easiest in the secured market, where the SNB conducts its operations. For sufficient absorption of reserves in the other segments, the SNB instead relies on the intermediation by banks with access to the secured market. For various reasons, intermediation may sometimes be incomplete, in turn reducing the demand for Swiss franc liquidity in those other segments. This puts downward pressure on these rates and thereby leads to larger deviations from the SNB policy rate.

In Chart 3, two visible examples of incomplete intermediation were the period immediately after the SNB transitioned to a positive policy rate and introduced its new implementation approach in September 2022 as well as the crisis at Credit Suisse in March 2023. At that time, Credit Suisse faced large outflows of client deposits that led to liquidity inflows at other banks, in turn putting downward pressure on money market rates. The SNB provided liquidity to Credit Suisse, which led to an increase in the total reserves in the system. As banks other than Credit Suisse experienced large liquidity inflows, the demand–supply balance in the money market shifted: some banks lowered their demand for liquidity, whereas others increased their supply. Both effects contributed to downward pressure on SARON and other money market rates, which was reflected in a higher PTI.

Variations in the PTI are also due to changing demand for the US dollar, which increases on regulatory important dates and especially at year ends. As this demand increases, markets price a (higher) premium for swapping foreign currencies into the US dollar. The USDCHF implied rate settles lower, implying a larger deviation from the SNB policy rate and, accordingly, a higher PTI.

While the PTI is indicative over time, its daily level should be interpreted with caution, as it highly depends on the number of rates and their weighting in the calculation for the PTI. For example, adding more rates to the index would simply increase the level of the PTI since the index sums up deviations in absolute terms. Moreover, the equal weighting of the rates is not an indication that the SNB considers them equally relevant: As outlined in its monetary policy strategy, the SNB seeks to keep secured short-term interest rates in Swiss francs close to its policy rate. Finally, other indicators, capturing, for example, regulatory regimes and broader financial market developments, might be necessary to assess conditions fully in the Swiss franc money market and thus the effectiveness of monetary policy implementation.

Summing up the insights from our pass-through analysis

When implementing monetary policy, the SNB continuously assesses how changes in the SNB policy rate are transmitted to interest rates. Our analysis of the pass-through of the SNB policy rate provides empirical evidence that the SNB's monetary policy implementation can be considered effective in recent years. Changes in the SNB policy rate passed through well to money market rates right after SNB monetary policy assessments. Likewise, money market rates have also been close to the SNB policy rate over time – apart from significant, but temporary, episodes. In addition to short-term rates, other financial conditions (such as longer-term rates and exchange rates) are relevant for the transmission of monetary policy to the broader economy. Our composite measure focuses only on the money market, but it could be extended to gain additional insights into the transmission of monetary policy.

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