

## Swiss Reference Rates

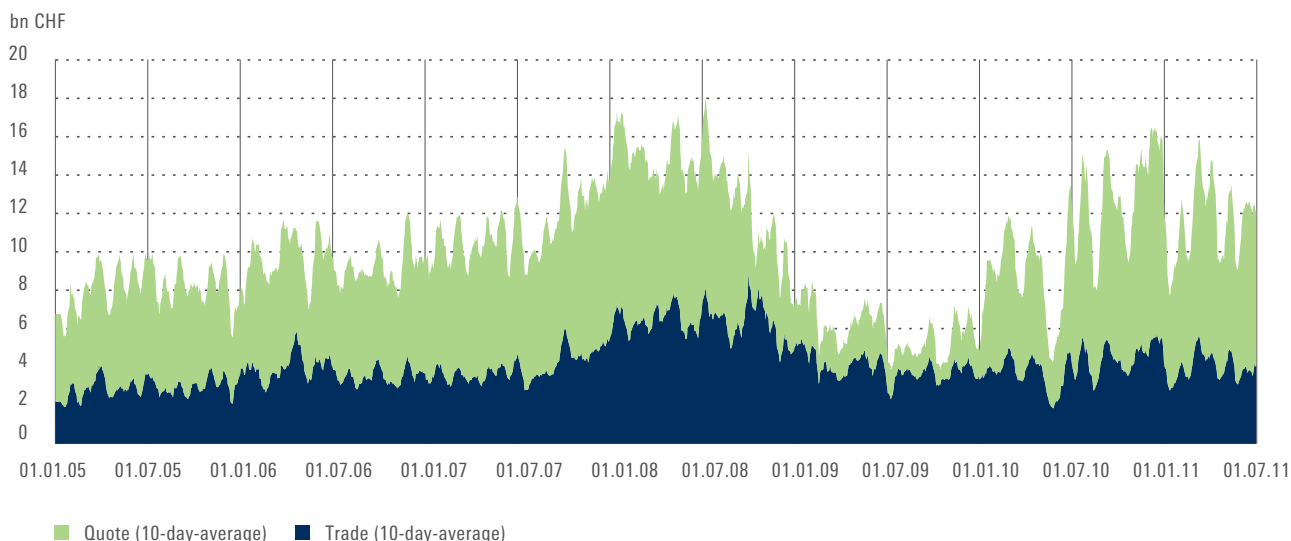
Internationally, overnight interest rates play a significant role in determining the yield curve. Going forward, the point of departure for Switzerland's yield curve is SARON<sup>®</sup>, a reference rate based on data from the Swiss franc repo market. Repo transactions represent an important instrument for banks in their daily liquidity management activities. Repo transactions have become a key pillar of the money markets – even the Swiss National Bank (SNB) uses repo transactions as a means of implementing its monetary policy. The new reference rate, SARON, will play an influential role in financial markets.

The Swiss Reference Rates comprise a total of 32 benchmark rates that cover a term spectrum ranging from overnight (ON) to 12 months (12M) plus two distinct indices for the ON term. The relevant calculations are based on CHF repo transactions concluded in the inter-bank market as well as on indicative quotes posted on the Eurex Zurich Ltd trading platform.

A reference rate must provide a representative picture of market events, in order for it to be accepted by the market and regularly used for transactions. The average daily volume on which SARON is based amounted over the last five years to CHF 10 billion (cf. fig. 1), about 44% of which is attributable to the volume of CHF repo transactions. The rest is based on the volume of representative tradable quotes. Indeed, the volume even increased during the crisis, reaching around CHF 14 billion on average. The decline during the later stages of the crisis was the result of the massive liquidity injections by the SNB, which rendered part of inter-bank business superfluous.

The Swiss Reference Rates Rules were drawn up in collaboration with the SNB. SIX Swiss Exchange Ltd can make modifications to the regulations in consultation with the SNB. Calculation and publication of reference rates is carried out by SIX Swiss Exchange Ltd.

**Fig. 1: Comparison Quote volume vs. Trade volume**



### Calculation and publication

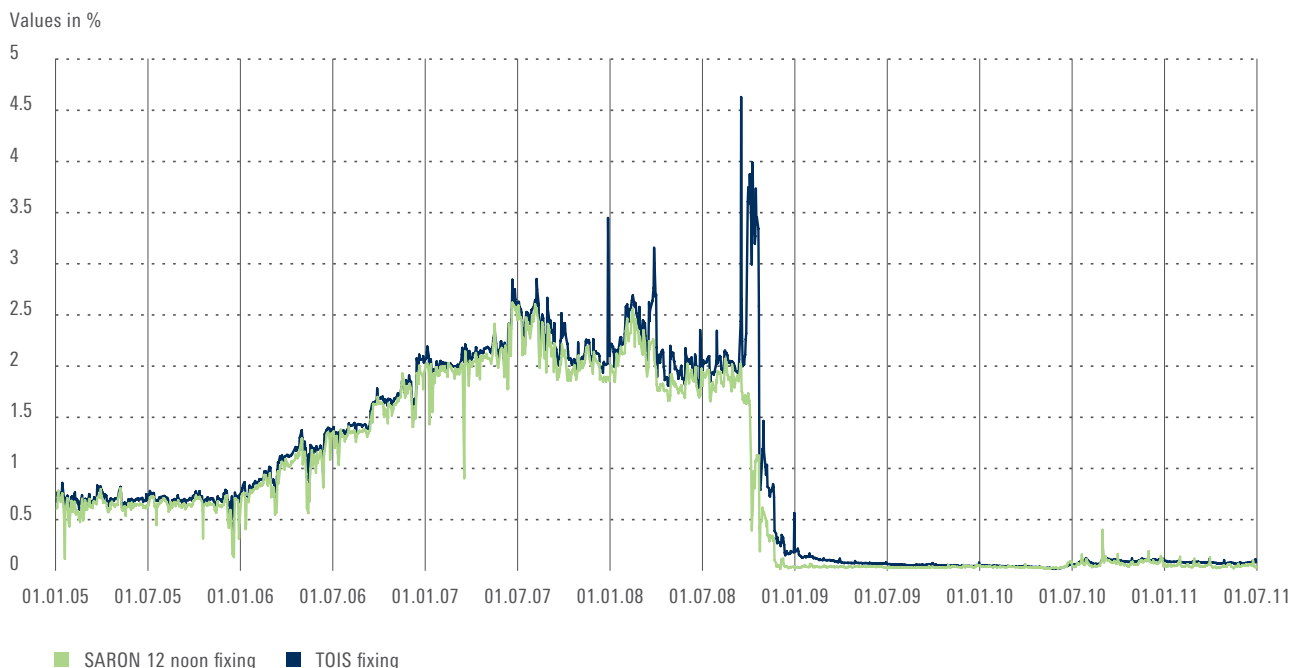
Calculation of the Average and Current Rate commences with the initial constellation of the order book. The first publication is made at 08:30 a.m. and the last at the end of the trading day for the given term. The Average and Current indices are calculated once a day at the end of the trading session and then published. This calculation and publication procedure for rates and indices is conducted on all official trading days of the Swiss franc repo market.

### SAR Swiss Average Rate®

The Average Rate is an ongoing, volume-weighted reading based on the transactions concluded and reference prices posted on the given trading day. The reference price is calculated on the basis of quotes available in the order book of the Eurex Zurich Ltd electronic trading platform, provided they lie within the parameters of the quote filter. The quote filter is parameterised in a way that limits the possibilities for manipulation to an absolute minimum. The Average Rate is continually calculated in realtime and published every ten minutes. In addition, a fixing is conducted three times a day at 12:00 noon, 4:00 p.m. and at the close of the trading day (6:00 p.m. at the earliest). These fixings serve as a reference reading for derivative financial products and the valuation of financial assets.

SARON differs from its predecessor, the Repo Overnight Index (SNB), primarily due to its stability. The latter index was not furnished with a trade filter and did not take quotes into account in the calculation. A comparison of the movements in the SARON and TOIS fixings over the past years shows that SARON's volatility was considerably lower (cf. fig. 2). The volatility of the TOIS fixing was six times higher on average, especially during the most turbulent phase of the crisis, following the collapse of Lehman Brothers. In calmer times, the TOIS fixing's volatility only diverges from that of SARON at month-end, as a result of the change in month. Swap sellers (fixed rate receivers) using the TOIS suffered heavy losses. Depending on the reason for concluding a swap (hedging interest rate risk, speculating on changes in interest rates or taking advantage of opportunities for arbitrage), the SARON Swap can offer advantages.

Fig. 2: Comparison TOIS fixing vs. SARON 12 noon fixing



### SCR Swiss Current Rate®

The Current Rate is based on the price of a transaction or, alternatively, specific quotes. In contrast to the way in which the Average Rate is calculated, volume is not taken into account. Possibilities for manipulation of the Current Rate are also minimised through the application of appropriate filtering criteria. Calculation of the Current Rate is made every three minutes and the result is published immediately thereafter. The Current Rate reflects the latest pricing in the money market and is an indicator of short-term changes.

### Swiss Average Index (SAION®) / Swiss Current Index (SCION®)

The Swiss Average Index and Swiss Current Index are based on the daily yields as indicated in SARON and SCRON®, respectively, and take into account interest payments received on overnight transactions. These indices can serve as the underlying index for structured products and ETFs. They are calculated and published once a day at the end of the trading day.

### Yield profile of the money market indices as at 30.06.2011

	SAION®	SCION®
YTD	0.01%	0.01%
> 1 year	0.05%	0.04%
> 3 years	0.22%	0.21%
> 5 years	0.90%	0.87%
Since 30.12.1999	1.08%	1.04%

### Money Market Performance (Overnight)



The performance figures are annualised readings; interest rate calculation norm: actual/360

### Overview Swiss Reference Rates

Terms to maturity	Average Rates	Current Rates	Average Indices	Current Indices
Overnight ON	SARON	SCRON	SAION	SCION
Tom/Next TN	SARTN	SCR TN		
Spot/Next SN	SARSN	SCR SN		
1 Week 1W	SAR1W	SCR1W		
2 Weeks 2W	SAR2W	SCR2W		
3 Weeks 3W	SAR3W	SCR3W		
1 Month 1M	SAR1M	SCR1M		
2 Months 2M	SAR2M	SCR2M		
3 Months 3M	SAR3M	SCR3M		
6 Months 6M	SAR6M	SCR6M		
9 Months 9M	SAR9M	SCR9M		
12 Months 12M	SAR12M	SCR12M		
IMM March Contract	SARMAR	SCR MAR		
IMM June Contract	SARJUN	SCR JUN		
IMM September Contract	SARSEP	SCR SEP		
IMM December Contract	SARDEC	SCR DEC		

## Overview

	<b>SARON</b>	<b>SCRON</b>	<b>SAION</b>	<b>SCION</b>
Name	Swiss Average Rate ON	Swiss Current Rate ON	Swiss Average Index ON	Swiss Current Index ON
Definition	Volume-weighted average interest rate	Snapshot of the latest intraday market price	Performance as calculated on the basis of the Swiss Average Rate	Performance as calculated on the basis of the Swiss Current Rate
Fixings	12:00 noon, 4:00 p.m. and at close of trading	No fixing	No fixing	No fixing
Initial peg	None	None	30.12.1999 = 100	30.12.1999 = 100
Historical data since	30.06.1999	30.06.1999	30.06.1999	30.06.1999
Introduction	25.08.2009	25.08.2009	25.08.2009	25.08.2009
Publication start	Daily at 8:30 a.m.	Daily at 8:30 a.m.	-	-
Publication interval	Every 10 minutes	Every 3 minutes	1x per day (at close of trading)	1x per day (at close of trading)

The foregoing information applies analogously to the reference rates for other terms. Indices are calculated only for the overnight (ON) term.

Further information can be accessed at:  
[www.six-swiss-exchange.com/trading/products/indices\\_en.html](http://www.six-swiss-exchange.com/trading/products/indices_en.html)

and from:

Index Department:  
E-mail: [customersupport@stox.com](mailto:customersupport@stox.com)  
T +41 58 399 5900, F +41 58 499 5900

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## Contact

**SIX Swiss Exchange Ltd**  
Selnaustrasse 30  
P.O. Box 1758  
CH-8021 Zurich

T +41 58 399 5454  
F +41 58 499 5455  
[info@six-swiss-exchange.com](mailto:info@six-swiss-exchange.com)  
[www.six-swiss-exchange.com](http://www.six-swiss-exchange.com)