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Swiss economy

SARON replaces Libor

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- The currently dominant reference interest rate, Libor, will be replaced by SARON at the end of 2021. Private investors and companies will be affected by this change through mortgage lending, the hedging of interest rate risks, and the assessment of balance sheet risks.
- Both Libor and SARON are short-term money market interest rates, but they differ in a number of respects, such as maturity, collateralization and the extent to which capital market expectations influence interest rates.
- Despite these differences, SARON is unlikely to behave differently than Libor would have in the coming years. The extremely low interest rates in the Eurozone and the still overvalued Swiss franc are likely to keep SNB policy rates in negative territory for a very long time to come. This also implies minimal movement in money market interest rates and, therefore, little difference between SARON and Libor.

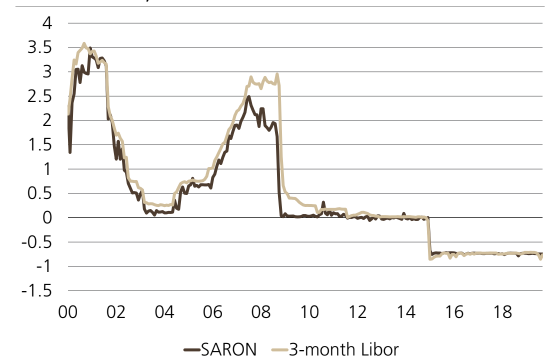
Over the last few months, the financial press reported that the current reference interest rate, Libor, will most likely be discontinued at the end of 2021 and will be replaced in Switzerland by the new reference interest rate SARON. This transition raises a number of questions.

Certainly the first question to consider is the extent to which private investors and companies will be affected by this change. This will depend on whether current contracts are directly or indirectly linked to Libor. For private investors, this is likely to be the case for mortgage loans; for companies, interest rate hedging instruments could be impacted. In general, all areas using reference interest rates will be affected.

There is also the question of how the shift from one reference rate to another will be implemented operationally and contractually. While the change should already be stipulated by newer contracts, older ones must be adapted to the new situation. That said, these are mainly legal issues, and industry associations and banks are working on ways to ensure that the transition will be as smooth as possible.

A third question concerns the characteristics of Libor and SARON and how these two reference interest rates could behave in different market situations (Fig. 1).

Fig. 1: Hardly any difference between SARON and Libor interest rates
Interest rates for SARON and 3-month Libor in Swiss francs, in %



Sources: Macrobond, UBS

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Application of reference interest rates

Interest rates vary from bank to bank. In order to have a uniform reference point for financial transactions, cross-institutional reference interest rates are calculated for certain currencies and interest terms.

The most important reference rate to date has been Libor (London interbank offered rate), which indicates the interest rate at which banks are willing to lend to each other for a short period of time (usually three months) in the interbank market.

The use of Libor is versatile. The interest rate on mortgage loans can be linked to Libor. If Libor rises or falls, the interest rate to be paid by the mortgage borrower also rises or falls. Such Libor mortgages now account for about 15 to 20 percent of the total Swiss mortgage volume.

Libor is used for interest rate derivatives, such as interest rate swaps, the most important financial derivative in Switzerland today (Fig. 2). In an interest rate swap, the counterparties exchange a fixed for a variable interest payment. The reference interest rate for the latter is often Libor.

In addition, reference interest rates are of great importance for companies when assessing balance sheet risks. The responsible managers evaluate the impact of the increase in Libor interest rates on the assets and liabilities side of the balance sheet and on equity.

Last but not least, until recently Libor played an important role in the Swiss National Bank's (SNB) monetary policy. In the past, the SNB defined a target range for the 3-month Libor, and it influenced the entire yield curve and the economy by controlling Libor in this range (Fig. 3).

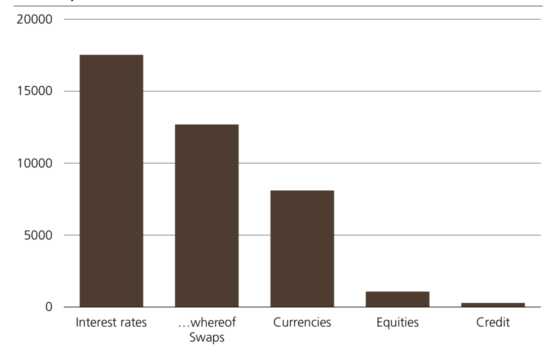
Libor: a phased-out model

Libor has been officially calculated by the British Bankers Association since 1986. It represents an average of interest rates submitted by a panel of banks. The banks indicate the interest rate at which each expects to receive an unsecured loan from other banks. Libor interest rates are stated for various maturities (from overnight to 12-month loans) and for up to ten currencies.

After the financial crisis in 2009, criticism of Libor started to emerge. On the one hand, Libor was susceptible to manipulation due to the survey method that is the banks' own assessment of the interest rate at which an interbank loan could be obtained. Several banks have been fined for Libor manipulations in recent years.

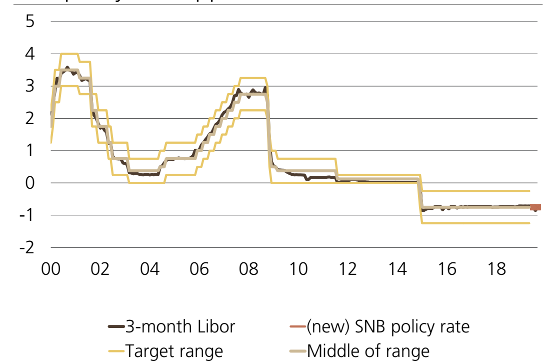
On the other hand, since the financial crisis, commercial banks have been increasingly less willing to lend to each other on an unsecured basis. This means Libor is less and less supported by real transactions and thus has also lost credibility as a reference interest rate.

Fig. 2: Interest rate swaps are the most important derivative financial instrument
Average contract volume of various derivative financial instruments in the years from 2015 to 2018, in CHF billion



Sources: SNB, UBS

Fig. 3: 3-month Libor crucial for SNB monetary policy until June 2019
SNB target range for the 3-month Libor and the SNB policy rate applicable since June 2019, in %



Sources: Macrobond, UBS

SARON: new Swiss reference rate

These various weaknesses have led to the replacement of Libor with new reference interest rates. At the end of 2021, banks will no longer be obliged to provide data for the calculation of Libor, which means that Libor quotations will likely no longer be available from 2022 onwards.

Risk-free overnight interest rates will now serve as a reference for all the above-mentioned applications. In Switzerland, SARON (Swiss Average Rate Overnight) will assume this function. In contrast to Libor, SARON is based on secured loans, with high grade bonds serving as collateral. Furthermore, SARON is determined only on the basis of actual transactions or binding offers. So the new reference interest rate has a broader basis and should be more robust against manipulation attempts.

Similar developments are taking place in other currency areas, too. In the US, Libor is to be replaced by SOFR (Secured Overnight Financing Rate), in the UK by SONIA (Sterling Overnight Index Average), in Japan by TONAR (Tokyo Overnight Average Rate), and in the Eurozone by €STER (Euro Short-Term Rate). While SOFR is also a reference interest rate on a secured basis, SONIA, TONAR, and €STER are based on unsecured loans.

SARON vs. Libor: similar, but not identical

In contrast to the 3-month Libor, SARON is an overnight interest rate, so there is no time premium and it is therefore likely to trade slightly lower. However, since the SNB tends to change its interest rates very cautiously and the time premium is generally small, this difference will probably not be significant.

Libor is based on unsecured loans, so the counterparty bears the risk of default. SARON is secured by high-grade bonds and the default risk is very low, which is why SARON interest rates are likely to be lower. During periods when there is no pressure on the banking system, this difference should be small due to the short maturity of the loans. However, during a banking crisis such as the one in 2009, the risk premium is likely to be material (Fig. 4).

As a 3-month interest rate, Libor is also influenced by the expectations of the financial market regarding future monetary policy. If the market expects the SNB to raise interest rates in the next three months, Libor will adjust in advance – in contrast to overnight interest rates. For this reason, in times of rising key interest rates, Libor trades well above the corresponding SARON interest rate.

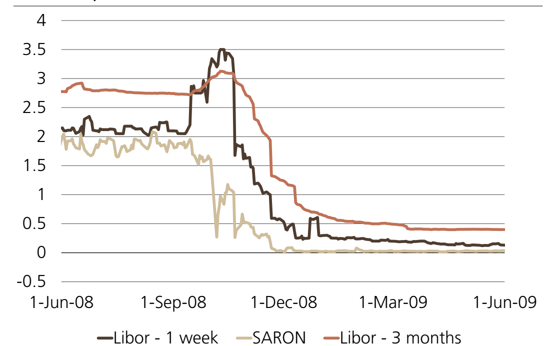
However, if the capital market expects key rates to fall, Libor may also quote below SARON, as is currently the case. Figure 5 shows market expectations for key interest rates, which in recent quarters were often below the current SNB policy rate. This is reflected in a SARON above the 3-month Libor.

Small impact on SNB monetary policy

From the end of the 1990s until the summer of 2019, the 3-month Libor played a crucial role in the SNB's monetary policy. This enabled the bank to influence the yield curve and the real economy in order to achieve its monetary policy goals. Libor was not set directly by the SNB; the SNB only indicated a range for Libor. Nevertheless, the SNB has been able to control Libor by injecting and withdrawing liquidity into money markets.

Fig. 4: Risk premium for Libor interest rates rose sharply in the Great Financial Crisis

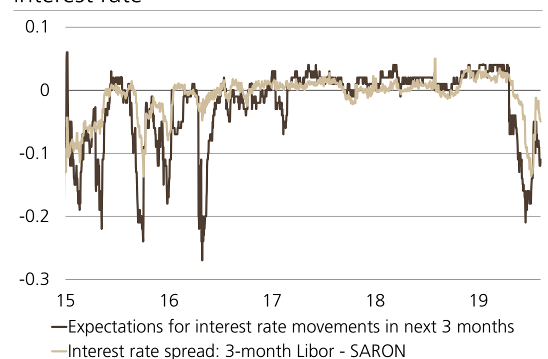
Unsecured Libor interest rates (maturity: 1 week and 3 months) and secured overnight interest rate SARON, in %



Sources: Macrobond, UBS

Fig. 5: SARON higher than Libor due to the expectations of interest rate cuts

Capital market expectations of interest rate development (using EUR-CHF futures) and difference between SARON and Libor, in %; negative values mean that the market expects interest rate cuts and the SARON interest rate is above the Libor interest rate



Sources: Bloomberg, Macrobond, UBS

With the end of Libor in sight, the SNB has adjusted its monetary policy concept. In the future, the SNB policy rate will play the dominant role in monetary policy (see Fig. 3). At its June monetary policy assessment, the SNB announced that it intends to keep short-term secured money market interest rates (i.e. SARON) close to the SNB policy rate.

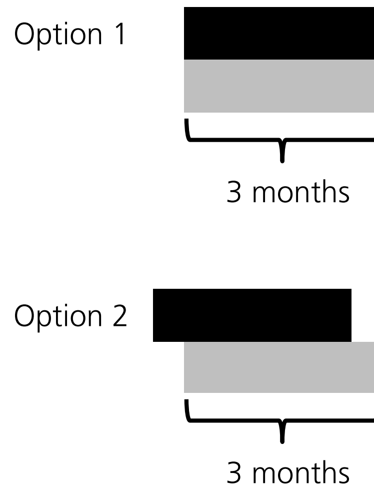
However, in light of the small difference between Libor and SARON, this does not imply any change in the SNB's monetary policy. The extremely low interest rates in the Eurozone and the still overvalued Swiss franc are likely to keep SNB policy rates in negative territory for a very long time. But this also means there will likely be little movement in short-term interest rates. So in the coming years SARON interest rates should not behave much differently than Libor interest rates would have.

From overnight SARON rates to 3-month interest rates
One challenge remains: to replicate an interest rate with a term of three months – by far the most important term of Libor – with an overnight interest rate such as SARON. One option is to create a 3-month interest rate by compounding the (daily) SARON interest rates for each corresponding period. Another possibility is to develop derivative instruments based on SARON, which would then be used to create a 3-month interest rate. However, the national working group for Swiss reference interest rates recommends working with compounded SARON interest rates, as it doubts that a robust market for SARON-based derivative instruments can be established in Switzerland.

There are various ways of compounding interest on SARON. A simple option is to use the overnight interest rates of the last three months at the end of a three-month period (Option 1 in Fig. 6). The problem with this approach is that the calculation of the compounded interest rate and the interest payment would fall on the same day. The model favored by the working group envisages that the period included in the calculation would start and end a few days earlier than the interest payment period (Option 2 in Fig. 6).

However, the differences between the two methods will hardly be significant, as interest rates will likely remain low and stable for the foreseeable future. Should they move, they would do so only very cautiously, in our view.

Fig. 6: Various options for compounding interest rates
Period for calculating the 3-month interest rate (black) and period to which the calculated interest rate applies (grey)



Sources: Financial Stability Board: „Overnight Risk-Free Rates: A User's Guide", 4 June 2019, UBS

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