Questions and answers on foreign exchange swaps in Swiss francs

What is a foreign exchange swap?

In a foreign exchange swap, the purchase (sale) of foreign currency and the sale (purchase) of the foreign currency at a later date are simultaneously agreed, with the SNB exchanging Swiss francs for foreign currency. The exchange rates for the spot and forward transactions are determined at the time the transaction is concluded.

Why does the SNB enter into foreign exchange swaps?

SNB foreign exchange swaps against Swiss francs can be split into three groups - first, swaps as monetary policy instruments for managing liquidity on the Swiss franc money market; second, liquidity swap arrangements to provide SNB counterparties with foreign currencies; and third, swaps for supplying foreign funding markets with Swiss francs via other central banks.

How can the SNB manage liquidity on the Swiss franc money market using foreign exchange swaps?

It does so through liquidity-providing or liquidity-absorbing foreign exchange swaps.

In the case of liquidity-providing foreign exchange swaps, the SNB sells Swiss francs to its counterparty for the term of the transaction, receiving foreign currency as collateral. The Swiss franc amount is credited to the counterparty for the term of the foreign exchange swap, and liquidity on the Swiss franc money market increases accordingly. If these foreign exchange swaps are not renewed at the end of the term, this means that liquidity is again withdrawn from the Swiss franc money market.

Liquidity-absorbing foreign exchange swaps work in the same way but in the opposite direction and can be used to reduce liquidity on the Swiss franc money market.

The SNB's contractual partners are commercial banks which fulfil certain requirements. Foreign exchange swaps are concluded on a bilateral basis with a wide range of domestic and foreign counterparties. Foreign exchange swaps were the SNB's most important instrument for supplying the Swiss franc money market with liquidity until the year 2000, when they were replaced by repo transactions.

How are SNB counterparties supplied with foreign currency through foreign exchange swaps?

What is involved here is a foreign exchange swap between central banks which serves to provide banks and other financial market participants in Switzerland with the foreign currency they require - in particular, US dollars. The SNB provides the foreign currency to financial market participants in Switzerland, as required, by means of repo auctions. The SNB obtains the foreign currency needed from the relevant central bank through liquidity swaps. The central bank in question receives Swiss francs from the SNB as collateral. In these transactions, the SNB takes on the function of a foreign currency intermediary. These transactions have no impact on the supply of money in Swiss francs. However, they help to counter tension on the funding markets.

How can the SNB supply foreign funding markets with Swiss francs through foreign exchange swaps with other central banks?

In this case, too, a foreign exchange swap between central banks is involved. The aim is to eliminate a Swiss franc shortage on the part of foreign banks which do not have direct access to the SNB's money market transactions. For this purpose, the SNB provides foreign central banks with Swiss francs through foreign exchange swap arrangements. They can then pass these on to commercial banks in their area of influence, as required. As collateral for providing Swiss francs, the SNB generally accepts foreign currency from the central bank in question or, when necessary, other securities. These foreign exchange swaps increase Swiss franc liquidity and therefore have a monetary policy impact; at the same time, they help to counter tension on the funding markets.

When did the SNB last use foreign exchange swaps as a monetary policy instrument?

From 10 August 2011, the SNB concluded monetary policy liquidity-providing foreign exchange swaps against US dollars, euros, pounds sterling and Canadian dollars, in order to accelerate the increase in Swiss franc liquidity it had already announced. As at the end of September 2011, some CHF 80 billion of liquidity-providing foreign exchange swaps were outstanding. This high level was reduced in the months that followed. Some of the swaps were replaced by liquidity-providing repo transactions and a certain reduction in liquidity was permitted, but the overall level remained exceptionally high. At the beginning of summer 2012, finally, foreign currency sales aimed at securing the minimum exchange rate of CHF 1.20 per euro led to another expansion of liquidity on the Swiss franc money market, so that the foreign exchange swaps became unnecessary. Since the end of June 2012, no more foreign exchange swaps have been concluded for monetary policy purposes by the SNB.

What swap arrangements are currently in use at the SNB?

The central banks participating in swap arrangements designed to provide the markets with US dollar liquidity are the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank (ECB), the US Federal Reserve and the SNB. In October 2013, these central banks announced that their existing, temporary swap arrangements would be made permanent and would thus remain in place until further notice.

The only swap arrangement currently in use with another central bank is with the US Federal Reserve. From spring 2012 until early March 2020, there was no demand in the weekly US dollar auctions conducted by the SNB. Following the outbreak of the coronavirus crisis there was renewed demand for US dollar liquidity. In March 2020, the central banks concerned announced coordinated action to enhance the provision of global US dollar liquidity via the standing arrangements. Between March and August 2020, the SNB conducted US dollar auctions initially daily and latterly three times per week. From September 2020, the frequency of these auctions was reduced to weekly again. The results may be found at US dollar auctions conducted by the SNB.

Has the SNB concluded any other swap arrangements with central banks?

As part of the extension of the swap arrangement with the US Federal Reserve in November 2011, the SNB decided to participate in the development of a network of temporary reciprocal swap arrangements with the central banks listed above. This allows the SNB to provide the other central banks with Swiss francs for their counterparties, if required. Conversely, it would also be in a position to provide liquidity not just in US dollars, but also in Canadian dollars, pounds sterling, yen and euros. At present there is no need to provide banks in Switzerland with liquidity in any foreign currency other than US dollars. The arrangements were concluded as a precautionary measure to ensure that liquidity-providing operations could be implemented rapidly if required. In October 2013, these arrangements, like those for the provision of US dollars, were converted into standing arrangements.

The SNB also has a swap arrangement with the National Bank of Belgium, which was put into place many years ago primarily with a view to possible requirements in connection with payment transactions. In June 2012, the SNB and the National Bank of Poland also concluded a CHF/PLN swap arrangement as a precautionary measure, in order to cover the need for Swiss franc liquidity in Poland, if required. In July 2014, the SNB signed a swap arrangement with the central bank of China. Aside from the possibility of allowing liquidity in renminbi and Swiss francs to be made available to the relevant markets as required, this swap arrangement constitutes a key prerequisite for the development of a renminbi market in Switzerland. In February 2018, the SNB concluded a swap arrangement with the Bank of Korea, further strengthening the cooperation between the two institutions.

What was the last time that foreign exchange swaps were used to supply foreign funding markets with Swiss francs via other central banks?

From October 2008 to January 2010, the SNB provided additional Swiss franc liquidity, mainly to banks abroad, through EUR/CHF foreign exchange swaps. These swaps were carried out under swap arrangements with the ECB, the National Bank of Poland and the Hungarian central bank.

Why is the SNB one of the leading central banks in the world in terms of its network of liquidity swap arrangements?

In the global financial system, the Swiss financial centre and the Swiss franc hold a key position. That is why the most important central banks around the world are interested in including the SNB in the swap arrangement network. From the SNB's perspective, participation makes sense to ensure that it can make liquidity in foreign currency available to financial market participants as needed.

What is the usual duration of a foreign exchange swap arrangement?

The contracting parties have the freedom to set the terms of monetary policy foreign exchange swaps as they wish. However, the duration does not usually exceed three months.

The terms of foreign exchange swaps between central banks under liquidity swap arrangements depend on the transaction used to provide the temporary liquidity to financial market participants. When US dollar operations were introduced in 2007, 28-day maturities were standard in the initial period; they were followed by swaps with various maturities, some of them only one day. Beginning in mid-March 2020, as part of the coordinated central bank action to enhance the provision of global US dollar liquidity, the SNB conducted US dollar auctions with terms of between seven and 84 days. In view of the sustained improvements in US dollar funding conditions and the decline in demand, since July 2021 only swaps with a seven-day maturity continue to be offered.

What does a foreign exchange swap cost?

The price of a foreign exchange swap depends on market conditions, in other words, the interest rate spread between the currencies in question. This means that, from an economic standpoint, during the term of the foreign exchange swap, the customer pays the rate of interest on the currency borrowed and receives the rate of interest on the currency lent plus a premium or discount (on the 'basis'), which is determined by supply of and demand for the respective currencies on the funding markets.

Which item in the balance sheet does the SNB employ for reporting the foreign exchange swaps it uses as monetary policy instruments?

Foreign exchange purchased temporarily under monetary policy foreign exchange swaps is reported in the balance sheet as part of foreign currency investments; the Swiss francs which have been temporarily sold are credited to the commercial banks' sight deposits at the SNB. Exchange rate gains or losses on the foreign exchange are reported for the term of the foreign exchange swap transaction under 'other assets' (profits), or under 'other liabilities' (losses). Once the maturity has expired, the items cancel one another out.

On its data portal under Foreign currency investments of the SNB, the Swiss National Bank publishes tables of quarterly data showing its foreign currency investments broken down by currency, including and excluding foreign exchange derivatives and with and without investments and liabilities in connection with foreign exchange swaps.

Which item in the balance sheet is employed for reporting the foreign exchange swaps the SNB uses to supply its counterparties with foreign currency?

The US dollars passed on under the liquidity swap arrangement with the US Federal Reserve are stated on the assets side under 'claims from US dollar repo transactions' and on the liabilities side under 'other term liabilities'.

Which item in the balance sheet does the SNB employ for reporting foreign exchange swaps used to provide foreign funding markets with Swiss francs?

The collateral received under active liquidity swap arrangements to supply foreign funding markets with Swiss francs is reported on the assets side under 'balances from swap transactions against Swiss francs', and on the liabilities side under 'banks' sight deposits'.

What happens to foreign exchange swaps when they expire?

Depending on monetary policy requirements - liquidity provision or liquidity absorption - the SNB allows foreign exchange swaps to expire or it renews them, either partially or completely.

The same applies for foreign exchange swaps between central banks. In this case, what is important is whether the commercial banks still require the liquidity they can obtain via repo auctions.

Does the SNB incur currency risk or any other risk by entering into foreign exchange swaps?

The forward transaction is concluded at the same exchange rate as the spot transaction, with a discount or premium to adjust for the currency-related interest rate spread. Consequently, foreign currency investments resulting from foreign exchange swaps do not carry any direct exchange rate risk. However, the parties in a foreign exchange swap are exposed to principal risk. The cash provider is exposed to such a risk because its counterparty may default, and this can result in a replacement cost risk since the currency from the swap is already earmarked for use in further investments and will now have to be obtained on the market. In the meantime, however, the exchange rate may have moved to the disadvantage of the SNB. This principal risk can be reduced by the continuous exchange of collateral (a process known as 'margining') during the term of the foreign exchange swap.