How Do Austrian Banks Fund Their Swiss Franc Exposure?

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Austrian banks have traditionally issued large volumes of Swiss franc-denominated loans. Although new issuance has virtually stopped since 2008, the outstanding volume (CHF 81 billion at mid-2012) will continue to pose a challenge to financial stability at least in the coming decade. This study examines how Austrian banks have refinanced their Swiss franc positions and how this changed with the onset of the financial crisis. We document the importance and evolution of three main funding sources: (1) the secured and unsecured interbank money market, (2) Swiss franc-denominated bond issuances, and (3) central bank financing operations. Our findings are that while activity in the unsecured money market almost came to a halt around the collapse of Lehman brothers and the issuance of Swiss franc-denominated bonds also decreased, the cross-border repo market proved resilient. Moreover, an important role in dealing with the funding drought was played by central bank operations, namely repo operations by the Swiss National Bank (SNB) and swap facilities provided by the SNB and the ECB.

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1 Swiss Franc-Denominated Loans Granted by Austrian Banks – an Overview

Foreign currency lending started to become popular among nonbank borrowers, especially households, in Austria in the mid-1990s. While the share of foreign currency lending made up only 1% of total loans to households at the beginning of 1995, it had risen to more than 31% by mid-2006 and had hovered around 30% until mid-2011. Due to the strong appreciation of the Swiss franc until the summer of 2011, the peak in the outstanding volume (in absolute terms) was reached in July 2011, when EUR 62 billion of loans to domestic nonbanks were denominated in a foreign currency, primarily in Swiss francs. Loans to households accounted for the lion's share – EUR 42 billion – of this amount. Real demand for new foreign currency loans started to decline in August 2008, which can be attributed to the financial crisis, to developments in foreign exchange markets that brought to the fore the risks of foreign currency loans, and also to Austrian authorities starting to implement a stricter stance on foreign currency lending. Nevertheless, the strong appreciation of the Swiss franc in 2010 and 2011 increased the euro value of the outstanding loans and thus prevented a noticeable decline in outstanding volumes.

Now these outstanding volumes are to a large extent a legacy of the past. Over the past few years, various supervisory initiatives in Austria succeeded in almost completely stopping the issuance of new Swiss franc-denominated loans: the "Extension of the FMA Minimum Standards for Granting and Managing Foreign Currency Loans and Loans with Repayment Vehicles" issued in spring 2010 requests banks – inter alia – to restrict new foreign currency lending to domestic households with a natural hedge or with the highest credit-

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worthiness. However, due to long residual terms to maturity, the outstanding volume will continue to be a challenge to financial stability in Austria: Three-quarters of foreign currency loans of domestic households and nonfinancial corporations outstanding in mid-2011 had a remaining maturity of more than five years, and more than 80% of these loans were bullet loans (i.e. loans whose principal is paid back at the end of the loan term). As far as Central, Eastern and Southeastern Europe (CESEE) and the countries of the Commonwealth of Independent States (CIS) are concerned, Austrian banks committed themselves under the "Guiding Principles" (issued by the Austrian Financial Market Authority (FMA) and the OeNB in early 2010) to refrain from granting new non-euro-denominated (non-U.S. dollar-denominated in CIS) foreign currency loans to unhedged households and small and medium-sized enterprises.

Foreign currency loans taken out by Austrian households also have another distinctive feature: More than 70% are bullet loans linked to repayment vehicles. Borrowers pay monthly installments for investment in separate repayment vehicles (predominantly capital market-orientated types of investment, e.g. mutual funds or life insurance contracts), which are expected to cover the total outstanding loan at maturity. Therefore, private foreign currency borrowers in Austria very often act as carry traders without having at their disposal the methods and knowledge of professional carry traders, though (for more details on the risks of foreign currency lending in Austria see e.g. Beer et al., 2010; Boss, 2003; and Waschiczek, 2002).

The largest share of foreign currency loans to Austrian nonbank borrowers was and still is denominated in Swiss francs; there was only one short period at the beginning of the 2000s when loans denominated in Japanese yen were nearly as popular. Since mid-2004, Swiss franc loans have accounted for 85% or more of the total of foreign currency loans to Austrian nonbanks (and for solidly over 90% in the case of households). At the end of June 2012 the total volume of Swiss franc loans to nonbank borrowers made up EUR 47 billion (CHF 56 billion), of which EUR 34 billion (CHF 41 billion) were owed by households.

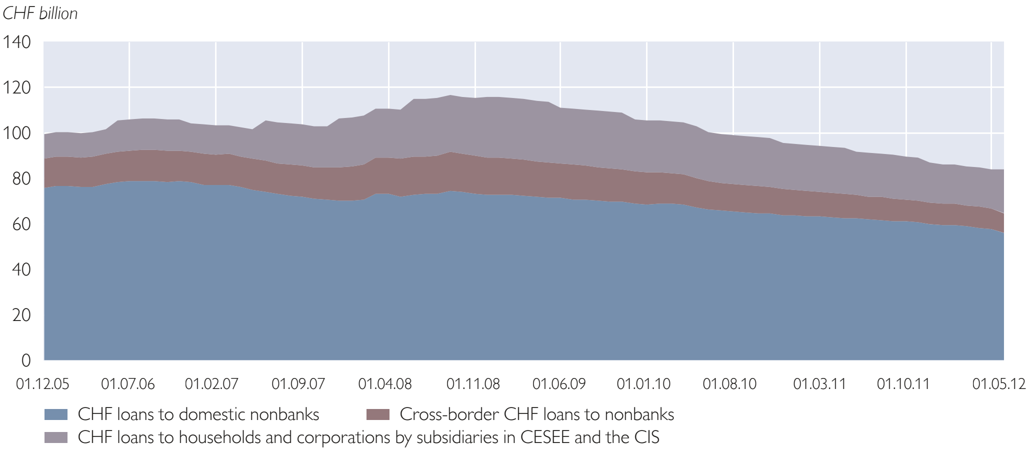
Besides the foreign currency loans to domestic customers, Austrian banks also have a substantial foreign currency exposure in CESEE and the CIS (see Pann et al., 2010). In CESEE and the CIS the Swiss franc plays a less prominent role, however. Of the EUR 86 billion of foreign currency loans granted by Austrian subsidiaries to households and nonfinancial corporations by mid-2012, EUR 16 billion (CHF 19 billion) or 19% were denominated in Swiss francs. Euro loans, on the other hand, accounted for EUR 50 billion (58%) and U.S. dollar loans for EUR 19 billion (22%).

Cross-border loans are the third aspect to be considered when analyzing Swiss franc-denominated lending by Austrian banks. At the end of June 2012 the total volume of cross-border loans outstanding to foreign nonbanks was EUR 7 billion (CHF 9 billion), of which EUR 2 billion (CHF 2 billion) went to the CESEE and CIS region and EUR 3 billion (CHF 4 billion) to Switzerland.

Altogether, in mid-2012, the outstanding amount of Swiss franc loans granted by Austrian banks to nonbanks came to EUR 68 billion (CHF 81 billion), which due to the lack of a customer deposit base in Swiss francs needs to be refinanced by various other (non-deposit) sources that we will describe in the following. Chart 1 illus-

Chart 1

Swiss Franc-Denominated Loans Granted by Austrian Banks to Nonbank Borrowers from End-2005 to Mid-2012



Source: OeNB.

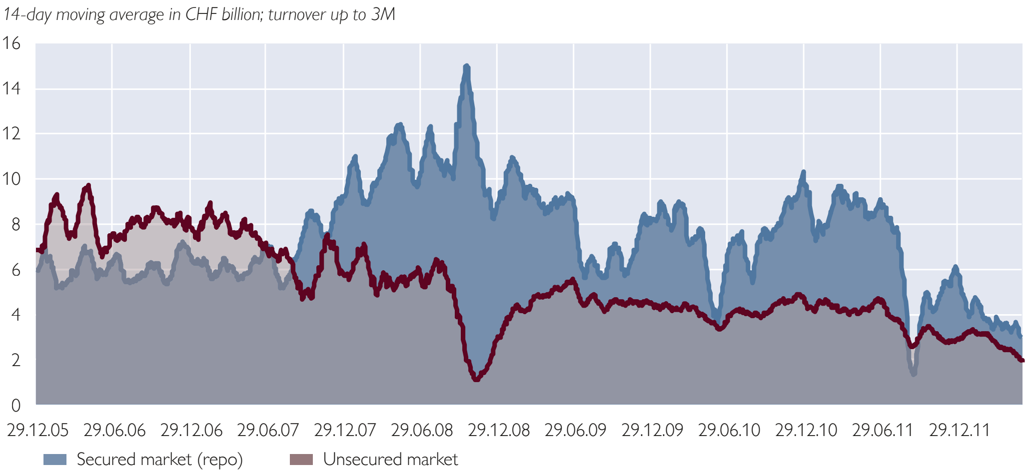
trates the evolution of the outstanding volume of Swiss franc loans granted by Austrian banks to nonbanks in Austria as well as in the CESEE and CIS region.

2 The Breakdown of the Unsecured Swiss Franc Interbank Money Market

Banks can refinance their loans through nonbank deposits or through the capital and money markets. Anecdotal evidence suggests that before the outbreak of the financial turmoil banks used the unsecured interbank money market to refinance a large part of their Swiss franc loans. However, against the backdrop of the global financial crisis and the fear of counterparty default risk, activity in the unsecured interbank money market collapsed, leading to a

Chart 2

Turnover in the Secured and Unsecured Swiss Franc Interbank Money Market



Source: SNB, Eurex.

higher reliance on the other financing segments.

Chart 2 plots the turnover in the unsecured (blue area) and secured (orange area) interbank money market in Swiss francs. The two money market segments show a diametrically opposite development until 2011, which was most pronounced at the height of the crisis in September 2008: Turnover plummeted in the Swiss franc unsecured interbank money market, whereas it doubled in the repo market.[2] Thereafter activity also decreased in the repo market, mainly because of the generous liquidity provision by the SNB and the low level of interest rates. Up to date there is no evidence that the relative importance of these two markets changed to the opposite. Based on turnover data we find that the Swiss franc repo market has proven to be a crisis-resilient financing source. Banks with access to the repo market in Switzerland were thus able to bridge unexpected liquidity outflows resulting from a collapse of the unsecured interbank money market.

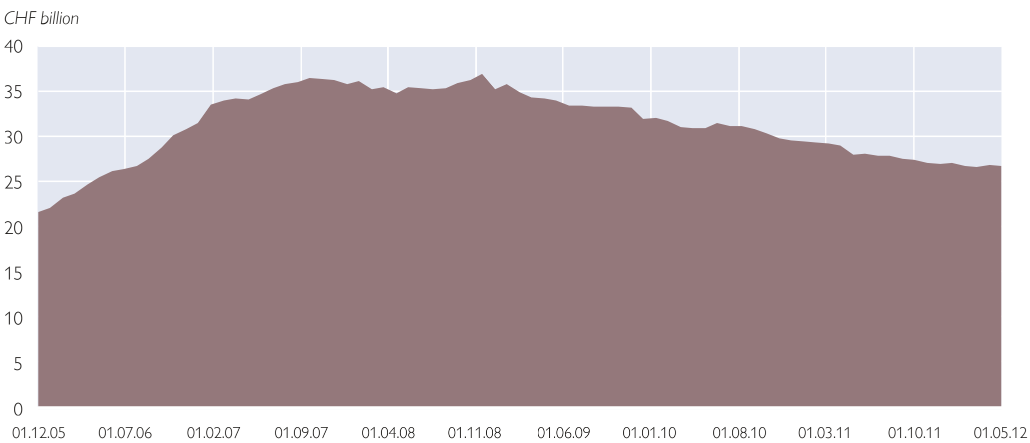
3 Capital Market Issuance – an Important Source of Funding

A sizeable part of Swiss franc loans is funded by issuances denominated in Swiss francs. At the end of June 2012 a total volume of CHF 26 billion in Swiss franc-denominated capital market issuances by Austrian banks was outstanding. In fact, since 2007 this form of funding has accounted for about 30% (and slightly more) of the total of Swiss franc-denominated loans granted to nonbank borrowers.

However, not only did the strong increase in the outstanding volume come to a halt in late 2007, since late 2008, the total outstanding volume has actually declined. The underlying reason for this decline is that currently very few new such bonds are being issued, while maturing ones are not being replaced.

Chart 3

Outstanding Volumes of Swiss Franc-Denominated Capital Market Issuances from End-2005 to Mid-2012



Source: OeNB.

[2] *Repos are concluded and settled in Switzerland via the Swiss Value Chain. The Swiss Value Chain is an integrated and automated infrastructure, which covers both trading and the settlement of the securities and cash sides. For repos, the Swiss Value Chain consists of Eurex Zurich Ltd's trading platform, SIX SIS Ltd's securities settlement system and the Swiss payments system (SIC).*

4 Secured Markets – a Reliable Source of Funding in Turbulent Times

How did Austrian banks finance their sizeable exposure amidst the breakdown of the unsecured interbank money market and the decline of Swiss franc-denominated bonds? To answer this question, we first examine the role of secured short-term funding via the Swiss repo market and the SNB's repo operations. Repo transactions are secured money market transactions in which the cash taker provides collateral in the form of securities and in return receives money from the cash provider. The delivered securities primarily serve the purpose of eliminating counterparty risk.

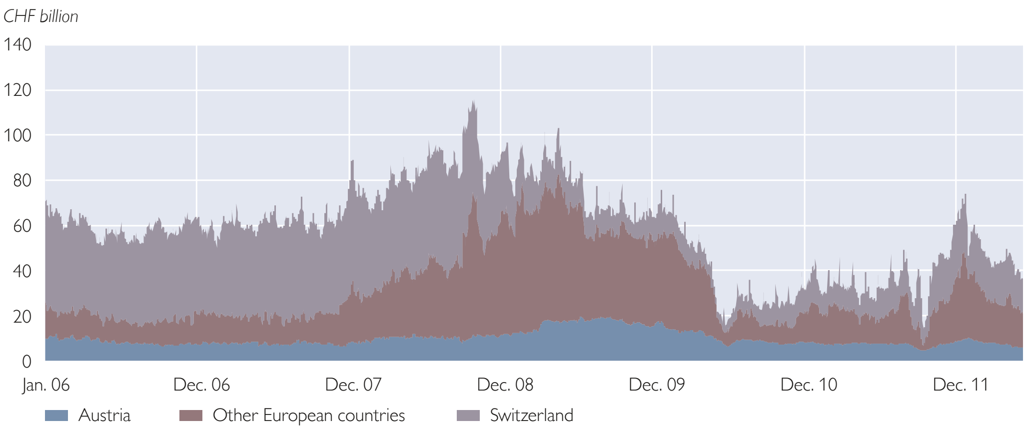
Chart 4 plots the outstanding volume in the Eurex interbank repo market – the most important secured money market in Swiss francs – as well as the outstanding volume of the SNB's repo operations. The outstanding volume is broken down by the cash takers' country of domicile (Switzerland, Austria and other European countries). As banks domiciled in Switzerland are almost exclusively providing Swiss franc liquidity the volume ascribed to Switzerland in chart 4 can be referred to as domestic transactions. Conversely, the volume related to cash takers domiciled in Austria and other European countries belongs to the cross-border repo segment.

Chart 4 thus illustrates the sizeable extent to which foreign banks relied on Swiss franc liquidity via the Swiss repo market during the financial crisis. While before August 2007 most activity in this market was domestic (i.e. between banks domiciled in Switzerland), the cross-border segment took over the lead with the onset of the financial crisis. During early and mid-2009, of the total amount outstanding of CHF 80 billion, nearly three-quarters were provided to banks domiciled outside Switzerland. The Swiss repo market thus became an internationally driven market during the financial market turmoil.

As far as Austria is concerned, two points are noteworthy. First, Austrian banks used the Swiss repo market already before the financial crisis. In the years before 2007, Austrian banks accounted for the vast majority of the cross-border market segment and also for a large share of the overall repo market.

Chart 4

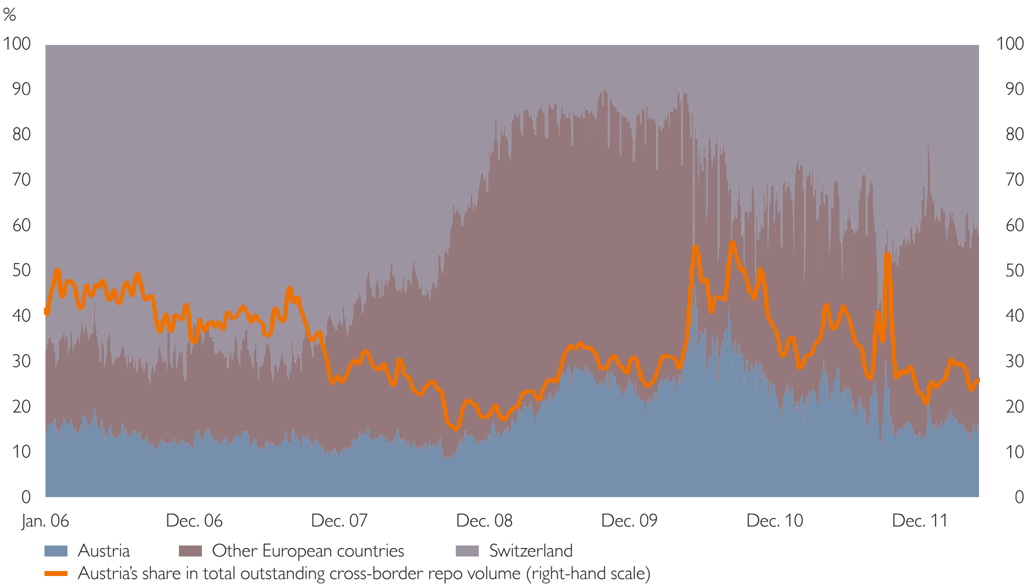
Outstanding Repo Volume (Interbank and SNB)



Source: SNB, Eurex.

Chart 5

Shares of Outstanding Repo Volumes (Interbank and SNB)



Source: SNB, Eurex.

Second, Austrian banks' use of the Swiss repo market increased during the financial crisis, and this increase was much less pronounced than the cross-border use by other European banks until mid-2010. Chart 5 highlights this dominant role, displaying the share of Austrian banks as a percentage of the total outstanding cross-border repo volume (bold line) and as a share of the total repo volume (blue area).

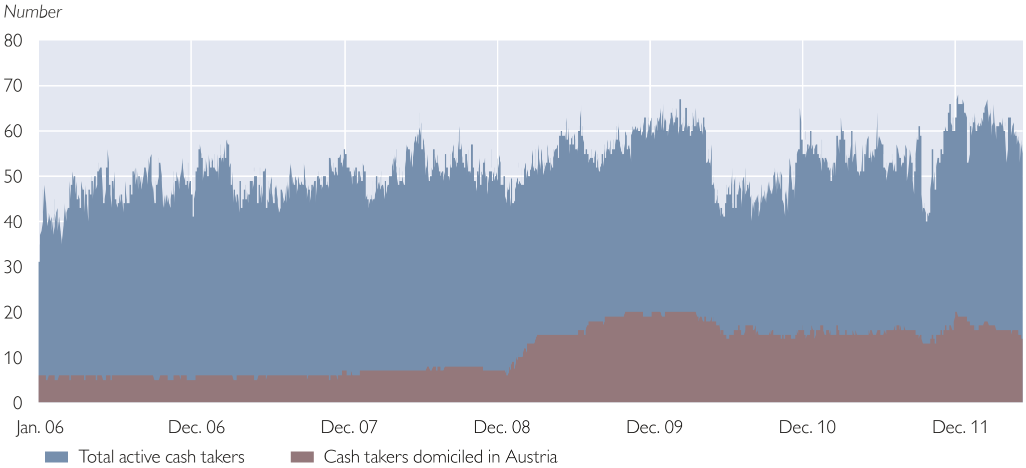
Regarding the ultimate source of Swiss franc funds, it is noteworthy that a large share of this cross-border volume in the Swiss repo market was directly provided by the SNB to banks domiciled outside Switzerland as opposed to the SNB providing funds to domestic banks, which then pass these funds on to banks domiciled outside Switzerland. Auer and Kraenzlin (2011) describe the SNB's policies in providing liquidity, highlighting that the SNB's direct provision of liquidity to banks outside Switzerland is a particular institutional feature not found in most other central banks. The original intent of allowing foreign banks to access the Swiss repo market was to reduce banks' dependence on a few large Swiss financial institutions and to improve the general liquidity in the banking system, thereby facilitating the steering of a longer-term money market rate, namely the three-month Swiss franc London Interbank Offered Rate (LIBOR) (see e.g. Kraenzlin and Nellen, 2012).

As the SNB uses the same platform as the interbank market, a large number of banks have established access not only to the SNB but also to numerous banks. While the repo system had 37 participants (of which four were domiciled outside Switzerland) in 1999, the number of participating banks had increased to 170 banks by 2012. Of these 170 banks, 59 are domiciled outside Switzerland, and of these 59 non-Swiss banks, 23 were located in Austria, 16 in Germany, and 6 in the United Kingdom.

Given that much of the secured cross-border funding came directly from the SNB, a large number of Austrian banks obtained liquidity from the

Chart 6

Swiss Repo System – Number of Participating Banks



Source: SNB, Eurex.

SNB. Chart 6 displays the number of Austrian banks that were active either in the SNB's operations or in the interbank repo market. The chart also shows that the overall number of active participants increased since the onset of the crisis. The main reason is that the Swiss repo market proved to be a stable refinancing source mainly because of sound principles of securitization and efficient risk management practices, which in turn reduce counterparty risks.[3] Overall, the increase shows that the Swiss repo market became an important refinancing source for banks domiciled outside Switzerland.

5 Further Official Funding via the SNB-ECB Swap Facility

Although a large number of banks domiciled outside Switzerland have access to the Swiss repo market, not all of them always have sufficient SNB-eligible collateral, and there are also many that do not have this access at all. The latter banks cannot draw the required Swiss franc funding via the SNB or the interbank market, where SNB-eligible collateral is also market standard. To overcome this problem, in October 2008 the SNB and the ECB jointly announced that they would directly distribute Swiss franc liquidity to their counterparties via an inter-central bank swap facility.

Since all Austrian banks that require funding for their Swiss franc exposure are registered with the ECB, the Austrian banks that had not obtained funds through the Swiss repo market instantly gained access to the primary source of Swiss franc funding, the SNB. Auer and Kraenzlin (2009 and 2011) show that with the introduction of the central bank swap facility, demand for Swiss francs in the euro area jumped to around CHF 40 billion and stayed at this level for about six months. Thereafter, demand for Swiss francs under the EUR/CHF swap facility levelled off and ceased after the termination of the facility in January 2010.

[3] *Collateral delivered in a repo transaction is marked to market twice a day. If under-collateralization occurs, a margin call is automatically triggered by SIX SIS Ltd.*

The precise volume of swap facilities used by Austrian banks is not publicly available, but the OeNB's Financial Stability Report 20 states that "Austrian banks accounted for, on average, 28% of all bids in CHF swap tenders and in July 2009 for even 45%" (see Pann et al., 2010, p. 71).

6 Summary

This paper casts some light on the main funding channels of Swiss franc-denominated loans granted by Austrian banks. While the new issuance of Swiss franc loans has come to a virtual halt since the crisis due to supervisory initiatives and the fact that the major risks of loans denominated in Swiss francs were made visible for borrowers, the loans granted in the past will continue to be a challenge to financial stability in Austria. A major issue in this regard is the refinancing of Swiss franc loans and its risks.

We show that the onset of the financial crisis severely limited the Swiss franc funding opportunities of Austrian banks in the cross-country interbank market and through the issuance of Swiss franc-denominated bonds. However, Austrian banks were able to put the funding of Swiss franc loans on a different footing: First, they established access to the Swiss repo market, under which they could also obtain SNB funding. Second, the joint SNB-ECB swap facility, brought into life in autumn 2008 and terminated at the beginning of 2010, was crucial in securing funding in the most stressed times.

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