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Access policy and money market segmentation

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ABSTRACT

Deviations between interest rates paid in the Swiss franc unsecured money market and the respective Libor rate are analysed for a period spanning the financial crisis. First, banks that have access to sources of secured central bank and interbank funding pay less than other banks. Second, foreign banks (not chartered in Switzerland) pay more than domestic banks. Third, both lines of segmentation are economically relevant but limited due to open access to sources of secured funding. Thus, access policy matters for monetary policy implementation and financial stability.

1. Introduction

Pricing on the Swiss franc unsecured money market is analysed using a proprietary dataset from January 2005 to February 2011 spanning the financial crisis. Interest rate spreads to the Libor (London Interbank Offered Rate) paid by intermediaries with and without access to secured funding through the Swiss National Bank (SNB) and the Swiss franc interbank repo market (access differential) are compared. Further differences in pricing between intermediaries with Swiss charters (domestic and locally based branches of foreign intermediaries) and purely foreign intermediaries (cross-border differential) are analysed.

The Swiss franc unsecured money market is of particular interest to analyse access and cross-border segmentation. First, the SNB – in contrast to most other central banks – has followed a permissive access policy in its monetary policy operations since 1999. The SNB grants access to a broad range of domestically chartered financial intermediaries (hereinafter domestic banks) and to foreign banks and securities broker/dealers not chartered in Switzerland (foreign banks). These intermediaries are eligible to participate in all the SNB's monetary policy operations. Thus, they can access the SNB's reserve accounts, the large-value payment system, as well as the infrastructure necessary for entering into repurchase agreements (repos) with the SNB or for participating in government debt and SNB Bill auctions. Second, because the same infrastructure elements are also used to trade on the interbank repo market, identical access criteria apply. Moreover, the Swiss franc interbank repo market is almost exclusively traded on this repo trading platform. Third, as many foreign banks access the large-value payment system, their trading activity in the Swiss franc unsecured money market is more transparent than for other currencies.

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This unique setup allows us to address several implications derived from the literature. First, access to secured funding via the central bank and the secured interbank market is considered to provide better insurance against liquidity shortages caused by market imperfections. We, therefore, expect to observe a negative access differential on the unsecured money market for banks having access to the repo trading platform. Second, access to secured funding becomes less valuable when the financial system holds excess reserves (structural liquidity surplus vis-à-vis the central bank). Also, the access differential is expected to fade away if unconventional monetary policy increases reserve holdings and correspondingly widens access to central bank reserves. Third, as access to the repo trading platform can be established at any time, one expects the access differential to be independent of money market stress. Fourth, in contrast to the access differential, the cross-border differential is considered to be persistent and positive as it is related to asymmetric information. In particular, the cross-border differential is not expected to change with the level of reserves. Finally, even though the cross-border differential is expected to react to stress in the money market due to soaring asymmetric information problems, the cross-border differential should fluctuate around the pre-crisis level as open access limits foreign banks' willingness to accept an excessive differential.

The regression results support the implications put forward in Section 3. Banks with access to the SNB's operations and the repo market paid on average 6.3 bp less before the financial crisis. During the financial crisis starting 2007, the access differential remained constant. Only after the collapse of Lehman Brothers in September 2008, the access differential started to diminish and vanished entirely towards the end of the sample. This is related to the SNB flooding the market with reserves after the bankruptcy of Lehman Brothers, which reduced the value of direct access to secured funding. In contrast to the access differential, the cross-border differential remained positive and more or less constant over the whole sample period at a level of around 4.8 bp. On the one hand, this confirms that its persistent nature is unrelated to the level of reserves in the financial system. On the other hand, even though the cross-border differential reacts to stress in money markets, it is tamed by the open access to secured funding.

The paper is structured as follows. Section 2 discusses generic access policies to put the SNB's policy into perspective. Section 3 provides a short overview of the literature and summarises findings as so-called implications. The SNB's responses to the financial crisis are discussed in Section 4. Section 5 provides a short description of the data used and the econometric methodology applied. The last two sections discuss the results and their robustness. Finally, policy relevance is discussed.

2. Access

While a huge body of literature deals with monetary policy implementation, this paper analyses the particular aspect of a central bank's access policy and its effects on the unsecured money market. A central bank can grant access to its reserve accounts, the large-value payment system and to its monetary policy operations. Monetary policy operations consist of open market operations and standing facilities such as discount window and intraday liquidity facilities. In addition, a central bank can directly intervene in financial markets through outright purchases of securities or foreign currencies.

A central bank aims to keep the market interest rate at the targeted level by providing a defined set of intermediaries with access to its open market operations. The provision or absorption of reserves via open market operations is mainly carried out by means of short-term repo transactions. Central bank policies of access to open market operations can be broadly categorised into the following three types: (1) Only primary dealers which represent a selection of domestic banks and securities broker/dealers are eligible (e.g. Federal Reserve Bank (Fed), Bank of Canada (BoC)); (2) All domestic banks including subsidiaries of foreign banks which are subject to minimum reserve requirements are eligible (e.g. European Central Bank (ECB), Bank of Japan (BoJ)); and (3) In addition to domestic and domestically chartered foreign banks, foreign banks that are not chartered domestically are also eligible (e.g. SNB).

Historically, the range of eligible counterparties for open market operations has differed across central banks (see Chailloux et al., 2008 for a more detailed comparison). For instance, the Fed has always granted access to a selective range of financial intermediaries, so-called primary dealers.[3] By contrast, the SNB grants access to all domestically chartered banks and securities brokers/dealers.[4] In addition, the SNB also grants access to banks and securities broker/dealers that are not chartered in Switzerland (hereinafter foreign banks). Thus, to participate in the SNB's open market operations, a foreign bank does not have to establish a branch in Switzerland.

Access to a central bank's standing facilities is usually granted to banks that are required to fulfil minimum reserve requirements (discount window and deposit type facilities) and/or to banks that participate in large-value payment systems.[5] The SNB applies the same access policy to both open market operations and standing facilities.[6]

Access to the interbank repo market shows great variety across currencies.[7] Access crucially depends on the organisation of the market in question. For instance, if repo markets are served by tri-party agents, participation depends on their criteria

[3] The number of primary dealers peaked at 46 in 1988 and, as of August 2011, declined to 20 institutions. See www.ny.frb.org/markets/primarydealers.html.

[4] Since 2010, the SNB has further opened access to domestically chartered insurance companies and asset managers of collective investment schemes.

[5] See Committee on Payment and Settlement Systems (2003).

[6] Note, the SNB has not provided a deposit facility but makes use of open market operations – such as reverse repos and issuance of SNB Bills – to withdraw reserves.

[7] See Committee on Payment and Settlement Systems (2010).

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