

NORGES BANK'S LIQUIDITY INSTRUMENTS

NORGES BANK INTRODUCES A COLLATERAL REQUIREMENT FOR FIXED-RATE LOANS

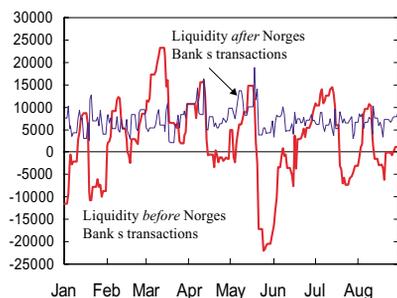
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With effect from 1 September 1999, Norges Bank introduced a collateral requirement for fixed-rate loans. This is in line with Norges Bank's policy of securing its loans to the banking sector. This article starts with an introduction presenting the background for the collateral requirement. The central bank repo facility was designed to provide such security, but the mixed experience with this arrangement prompted a change in the lending regulation and the collateral requirement applying to fixed-rate loans.

1. Introduction

Money market liquidity is defined as the banks' sight deposits with Norges Bank from one business day to the next. This balance is influenced by transactions on Norges Bank's balance sheet that are generally undertaken for purposes other than to steer money market liquidity. The central government's accounts in Norges Bank are used for loan transactions and fiscal policy purposes. These liquidity flows are substantial in periods, but follow a set pattern. Norges Bank's transactions in the foreign exchange market and changes in the circulation of notes and coin also influence money market liquidity.

Chart 1 Money market liquidity in 1999 before and after Norges Bank's transactions. In millions of NOK



Source: Norges Bank

Furthermore, Norges Bank can supply or withdraw liquidity in order to neutralise fluctuations in liquidity. The fluctuations are primarily caused by central government ingoing and outgoing payments. Norges Bank will ensure that there is always sufficient liquidity for the banks to effect their payments. Norges Bank can use several instruments to smooth fluctuations in money market liquidity. The most common instru-

ments used are repos and fixed-rate loans, which are used to supply liquidity, and fixed-rate deposits, which are used to mop up liquidity.

Pursuant to §§ 19 and 20, c.f. §22, of the Norges Bank Act, the central bank shall normally only grant liquidity loans to and receive deposits from banks. Banks' access to the Bank's lending and deposit facility is subject to Regulation no. 586 of 3 June 1997 on banks' access to loans and deposits in Norges Bank etc. with subsequent changes. The repo facility is described in a circular.

Norges Bank attaches importance to securing the liquidity it supplies to the money market. Norges Bank required collateral for its loans to banks until the end of the 1960s. The collateral requirement was gradually relaxed as Norges Bank extended loans without requiring that securities be deposited, but that the counterparty (the banks) include securities in its portfolios as a basis for access to the central bank lending facility. With the sharp growth in banks' borrowings from Norges Bank, the requirement of underlying collateral was deemed to be of little significance in 1986 and was thus removed from the regulation. In the period 1986 to 1990, Norges Bank's loans to banks amounted to about NOK 60-70bn, while their holdings of government bonds came to around NOK 20bn.

Since the beginning of the 1990s, Norges Bank has gradually re-introduced the principle of full collateral for loans from Norges Bank. Norges Bank first introduced limitations on access to its fixed-rate lending facility and subsequently required collateral for overnight loans. Norges Bank's exposure to the banking sector was reduced as a result of a substantial net supply of liquidity from the state in connection with an expansionary

fiscal stance early in the 1990s. The banks' need for borrowing was gradually reduced towards the mid-1990s.

In November 1993, Norges Bank introduced a collateral requirement for banks' overnight loans from the central bank, and since September 1995 the requirement for such loans has been 100%. With the start-up of Norges Bank's settlement system (NBO) on 24 November 1997, the provisions on intraday loans came into force. Such loans through the day are granted against collateral. Individual banks could initially borrow up to twice the value of that collateralised. The collateral requirement was revised on 8 June 1998, allowing banks to borrow up to 1.5 times the collateralised value, and with effect from 8 December 1998 Norges Bank required full collateral for D-loans.

The purpose of the collateral requirement was to eliminate Norges Bank's credit risk exposure to individual institutions. Systemic risk in the financial system will have to be handled by instruments other than liquidity policy instruments. There is little to suggest that the central banks shall assume risk when supplying unsecured liquidity given the objective of liquidity policy. Developments in the 1980s showed that out of concern for financial stability it may be appropriate to establish automatic brakes should credit growth start to rise sharply. The central bank's collateral requirement can act as such a brake.

In the last few years, banks have periodically been in a borrowing position vis-à-vis the central bank, normally when tax payments fall due. Large volumes of liquidity are normally withdrawn in May and November, boosting demand for liquidity that can be difficult to accommodate through repos alone. Norges Bank has thus in periods with high demand for liquidity accommodated this demand primarily through repos and unsecured fixed-rate loans. Currency swaps have also been used on occasion.

2. The use of repos

In June 1996, Norges Bank decided to introduce a repo facility. Repos were to replace liquidity supply in the form of unsecured fixed-rate loans, and the changeover was to be gradual. Benchmark government bonds were the only securities permitted in the repurchase agreements with Norges Bank. The first repos were used in February 1997.

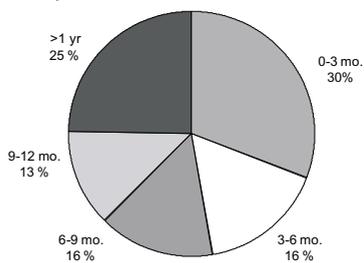
It was pointed out at the time that the repo facility was subject to a number of limitations. Outstanding volumes of government securities were limited, so that the repos were not necessarily of a volume required to fully accommodate liquidity demand in some periods. Liquidity cannot be supplied with effect on the same day when using repos and technical conditions associated with the estimation of forward rates made it impossible to cover very short periods with borrowing needs. Against this background, Norges Bank decided to maintain unsecured fixed-rate loans as a liquidity policy instrument. Since 1997, Norges Bank has carried out 59 repo transactions. The repo facility has contributed to reducing Norges Bank's exposure to the banking sector, but not to the extent intended.

On two occasions, changes were made to the repo scheme. First, the number of decimals in the forward rate was changed from three to six in November 1997, which made it possible to enter into repo agreements for very short periods. In April 1999, the scheme was extended to include all securities that are eligible as collateral for loans in Norges Bank. The routines in Norges Bank for repos made it necessary, in practice, to limit the selection of securities that can be used. Norges Bank decided to include the benchmark bonds issued by Norges Kommunalbank.

Unforeseen variations in money market liquidity, often generated by large movements over government accounts (in this case typically withdrawals) can give rise to an acute demand for liquidity that must be accommodated the same or next day. As a rule, however, securities transactions associated with a repo require a minimum of two days from the time of the auction to the time the liquidity is actually supplied. In such cases, Norges Bank has often offered unsecured fixed-rate loans at short notice, for instance with effect on the same day.

The fact that repos are limited to government securities, which feature relatively small outstanding volumes, has limited bidding by banks. Wide fluctuations in the stock of Treasury bills have also influenced the banks' bidding on repos. The extension to include securities issued by Norges Kommunalbank did not prompt any significant increase in tender activity. The banks have generally submitted bids with securities with a short residual maturity, i.e. primarily Treasury bills, and $\frac{3}{4}$ of repos involve securities with a residual maturity of 12 months or less (see Chart 2).

Chart 2 *Residual maturity of securities used in repurchase agreements with Norges Bank since February 1997.*



Source: Norges Bank

The banks can use securities that are eligible as collateral for repos with Norges Bank both to satisfy the liquidity reserve requirement and as collateral for access to D-loans. Securities that are used as collateral for D-loans in Norges Bank can also be used to satisfy the liquidity reserve requirement (see box). If a bank takes out a D-loan, liquidity is, *ceteris paribus*, reduced as a percentage of liabilities. In some cases, this means that the bank no longer satisfies the liquidity reserve requirement. Given that banks want to maintain the smallest possible securities portfolio, competition may arise as to the purpose for which the securities are to be used. Repos then compete with the liquidity reserve requirement and access to D-loans. This also places limitations on repo volumes.

When Norges Bank decided to introduce the repo facility, the aim was to include counterparties other than just banks. The objective was to enhance the distribution of liquidity in the money market. This could influence interest rates more quickly and stimulate the market for repos.

Normally, the central bank only extends liquidity loans to and receives deposit from banks. Norges Bank decision to introduce repos in liquidity management was based on §21 of the Norges Bank Act, which regulates the central bank's use of market operations, where limitations regarding counterparties are not stipulated. However, this interpretation was questioned, and Norges Bank has therefore only used banks as counterparties. The Ministry of Finance has put forward a bill (see Proposition no. 96 to the Odelsting (1998-1999)) that clarifies that Norges Bank shall have access to entering into repos with others than banks. If this bill is adopted, repos could become a more effective liquidity policy instrument.

In order to provide banks with an incentive to tender for repos rather than unsecured fixed-rate loans, Norges Bank decided to set the interest rate on fixed-rate loans using an add-on in relation to the most recent repos. It was also important for Norges Bank to underline the difference between the pricing of loans with collateral and loans without collateral. The add-on was first set at 35 basis points and was later increased to 60 basis points on two occasions.

3. Norges Bank introduces fixed-rate loans with a collateral requirement

The combination of repos and unsecured fixed-rate loans did not provide Norges Bank with sufficient security for its loans to banks. In addition, Norges Bank was not authorised to enter into repos with others than banks. Given the objective of having a flexible and simple administrative system with adequate security, it was natural to revert to the idea of a collateral requirement for fixed-rate loans.

The lending regulation was amended as of 1 September 1999 with the introduction of a collateral requirement for fixed-rate loans in Norges Bank. In addition, the list of securities eligible as collateral for loans from Norges Bank was expanded. As a result, the capacity for supplying liquidity to the money market was increased and Norges Bank's undesired risk exposure reduced. The repo facility is still operational but it is unlikely that the fixed-rate facility and repo facility will be used simultaneously.

Norges Bank now applies the same collateral requirement to D-loans and fixed-rate loans. A much broader range of securities can thus be used as collateral under the new fixed-rate lending facility than under the repo facility. The securities provided as collateral will be pooled, making it unnecessary to earmark specific securities for a given type of loan. This enhances the flexibility of the system and increases the capacity for collateralised liquidity supply.

Under this arrangement with the pooling of collateral for D-loans and fixed-rate loans, a bank's access to D-loans is reduced by an amount equivalent to the fixed-rate loan allotted. Unless the bank furnishes further securities as collateral, the bank's access to D-loans will be reduced.

Banks have a stock of securities that are already deposited as collateral in an account with the VPS

for loans in Norges Bank. If a bank does not consider it necessary to increase its access to loans in Norges Bank after the allotment of a fixed-rate loan, securities transactions and registration with the VPS are not required in connection with the allotment of fixed-rate loans. On the other hand, for a bank to maintain its access to D-loans unchanged, it must deposit new securities with the VPS that can be used as collateral for loans in Norges Bank the day before the fixed-rate loan is recorded. The routines for this have not been changed.

With the introduction of a collateral requirement for fixed-rate loans, Norges Bank expanded the list of eligible securities. In order to ensure that the system functions in a satisfactory manner, a broad selection of eligible securities is required.

Previously, eligible securities comprised bonds and bills issued or guaranteed by the Norwegian government or other OECD states that had not renegotiated their external debt in the past five years. Units in unit trusts whose statutes limited investment to Norwegian government and government-guaranteed bonds and bills, and bonds and notes issued or guaranteed by Norwegian municipalities or counties, Norwegian state-owned enterprises and Norwegian mortgage companies have also been accepted as collateral for loans from the central bank.

The extension of eligible securities includes both Norwegian and foreign private bonds and bills. Foreign securities must be issued by OECD member states and satisfy certain minimum credit rating requirements of the leading credit rating agencies (Moody's and Standard & Poor's). Norwegian private securities must satisfy certain eligibility criteria, although there is no absolute rating requirement. Only a few issuers in Norway have been subject to a credit rating.

Banks were previously required to enter into an agreement with Norges Bank and an application was required for furnishing foreign securities as collateral. Norges Bank has concluded agreements with the Swedish and Danish central banks, and Euroclear in Brussels, to provide for cross-border collateral for loans in Norges Bank. Banks still have to apply to Norges Bank for approval to use foreign securities, and Norges Bank can refuse to accept certain securities as collateral for loans.

Norges Bank has not accepted bank certificates as collateral for loans in Norges Bank, partly due to the covariance between the borrower's credit risk and

the collateral's security. Eligibility of this type of securities as collateral could prompt banks to issue certificates against each other to facilitate access to loans in Norges Bank and reduce the cost of furnishing collateral.

In future, Norges Bank will, however, accept on a limited scale bonds and certificates issued by banks as collateral for loans in Norges Bank. At the same time, access to furnishing securities issued by bank-owned mortgage companies will be reduced, and access regulated by a quota system. The quota is set so that no bank can furnish bonds or certificates issued by Norwegian bank-owned mortgage companies and Norwegian banks for more than 50 per cent of the nominal value of the collateral furnished. A bank may not furnish collateral in the form of securities that it has issued itself or securities issued by a mortgage company in which the bank's ownership interests exceed $\frac{1}{3}$ of the total. Banks with more than 50 per cent of total collateral in mortgage company issues on the date of entry into force of the lending regulation are provided with a transitional period up to 1 March 2000 to satisfy the quota requirement.

When securities are used as collateral for loans in Norges Bank, Norges Bank is in principle exposed to credit, interest rate and liquidity risk. Securities that are denominated in a currency other than Norwegian kroner will also be associated with a currency risk. Reduction rules, which take into account the risk linked to different classes of securities, have been established to limit these risks.

In order to establish a simple administrative system, emphasis has been placed on clear and simple rules. The rules therefore involve a certain measure of discretion. Under the previous arrangement, Norges Bank granted D-loans for 95 per cent of the nominal value of Norwegian government and government-guaranteed securities and 85 per cent for other securities.

Norges Bank has established a rating system for the securities, with three risk classes and different grades within each class, c.f. Table 1. A class has been established for interest rate risk, credit risk and currency risk. All securities are exposed to interest rate risk as a change in interest rates affects the value of the collateral. Credit risk is linked to an evaluation of how likely it is that the issuer will honour his obligations. The risk is considered to be zero for government and government-guaranteed issuers in OECD member states. The reduction will be greater,

the higher the risk linked to the issuer is. All securities denominated in a currency other than Norwegian kroner will be subject to a reduction for currency risk.

As previously, government and government-guaranteed securities are eligible with a loan value of 95 per cent. Norwegian securities guaranteed by municipalities or counties will be assigned an improved loan value of 90 per cent compared with 85 per cent under the previous system. As a result of the increased risk arising from the inclusion of private securities as eligible collateral, Norges Bank will apply a somewhat greater reduction for this type of securities, based on the credit rating of the issuer.

Foreign securities issued in countries in the OECD area, which have not renegotiated their external debt in the past five years, shall in principle be accepted as collateral on a par with Norwegian securities, ie no credit risk but reduction for currency risk. Norges Bank also requires that eligible securities are denominated in euros or another currency issued by the countries that meet the rating requirements.

Several central banks use market rates to estimate the loan value. Norges Bank intends to introduce the same type of system for estimating the loan value. Such a system will improve the balance between the collateral furnished and the actual risk assumed by Norges Bank. So far, this solution has been impeded by the lack of the necessary systems at Norges Bank. Norges Bank will continue until further notice to calculate the loan value in terms of nominal value, with the exception of unit trusts that only invest in Norwegian government and government-guaranteed securities. The loan value is calculated on the basis of redemption value for unit trusts.

In the past few years, Norges Bank has offered repos by auction, while the interest rate on fixed-rate loans has been set by the Bank. With the introduction of collateral requirement for fixed-rate loans, Norges Bank will normally revert to fixed-rate loan auctions.

Norges Bank normally offers fixed-rate loans with liquidity effect the following business day, which provides the banks with ample time to change their collateral position, for example in order to maintain their access to D-loans. If a fixed-rate loan has to be allotted with same-day effect, access to D-loans is reduced for the remainder of the day after the fixed-rate loan is recorded. With the rules and systems

limitations that apply to securities transactions, banks do not at present have the possibility of increasing their access to D-loans until the next business day. Access to overnight drawings is also reduced, but in recent years the banks have used this facility on a limited scale.

Norges Bank requires full collateral for the fixed-rate loans that are allotted. The banks should therefore have a sizeable stock of securities for use as collateral for loans in Norges Bank in order to avoid a substantial reduction in their access to D-loans when fixed-rate loans are allotted. This requires an adjustment in banks' balance sheets, with higher costs as a result of increased holdings of securities.

Liquidity reserve requirement

The purpose of the liquidity reserve requirement is to ensure that banks are in a position to honour its liquidity obligations at all times. The requirement is provided for in the Act of 24 May 1961 relating to Commercial Banks and the Act of 24 May 1961 relating to Savings Banks, last amended by Regulation no. 1107 of 2 December 1998. Banks' liquid assets shall make up at least 6 per cent of an individual bank's liabilities.

Liquid assets comprise:

- notes and coin
- deposits in Norges Bank
- Norwegian Treasury bills
- Norwegian government and government-guaranteed bonds and bills, less bonds and bill that are deposited as collateral
- securities that a bank has deposited as collateral for D-loans, less same-day D-loan drawings.

Liabilities comprise:

- deposits from others than domestic and foreign banks
- net debt to other domestic foreign banks excluding bonds and certificates
- bonds and certificates outstanding, less a bank's holdings of bonds and certificates issued by other banks subject to the liquidity reserve requirement.

The liquidity reserve requirement must be fulfilled at all times.