

Collateral for loans from Norges Bank – new rules

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Norges Bank extends loans to banks against collateral in the form of securities. These loans are provided in connection with payment settlement and the implementation of monetary policy. Since the bond market in Norway is relatively small, Norges Bank has up to now accepted a broad range of securities as collateral. Norges Bank has thereby accepted a higher level of risk in its lending to banks than a number of other central banks. In recent years, banks' available resources in Norges Bank – sight deposits and unutilised borrowing facilities – have increased more than borrowing requirements. This has made it possible for Norges Bank to adapt the rules for collateralisation so that they are more in line with rules in other countries. The article describes Norges Bank's previous rules for collateral for loans, the background for the changes that have been made, the new rules and the consequences the changes might have for banks.

1. Introduction

Norges Bank has required its loans to banks to be fully collateralised since 1999. Banks' borrowing facilities are determined by their collateralisation, which can vary from day to day.² In 2005, banks' borrowing facilities largely varied between NOK 100 and 160 billion. Borrowing facilities in Norges Bank are in general important for payment settlement and the implementation of monetary policy, but small and medium-sized banks primarily use the facilities to meet the liquidity reserve requirement.³ Collateralisation is to reduce the risk that Norges Bank will incur losses if a bank is placed under public administration. Norges Bank's requirements should therefore ensure that securities used as collateral are readily negotiable and have high creditworthiness even in periods of financial turbulence.

Government bonds are not issued to any great extent in Norway, and the supply of bonds from other public authorities has also been limited. Other types of bonds were therefore accepted as collateral in Norges Bank when the requirement for full collateralisation was introduced in 1999. These included corporate bonds and bank bonds (bonds issued by Norwegian banks and mortgage companies owned by Norwegian banks).

These liberal rules meant that Norges Bank accepted a higher level of risk than most other comparable central banks. A number of factors have now made it possible to change the rules in order to reduce Norges Bank's risk. First, banks' borrowing facilities have increased more than borrowing requirements. Second, the new Act relating to financial collateral (2004) provided for immediate realisation of collateral, allowing for banks' borrowing facilities to be calculated on the basis of market value rather than nominal value. Third, provisions

have been made for the issue of asset-backed bonds in Norway. These bonds may account for a large share of banks' collateral in a few years' time.

On the basis of the above, Norges Bank has drawn up new rules. The most important changes they introduce are that i) Norges Bank will calculate banks' borrowing facilities on the basis of market value, ii) haircut rates for securities have been reduced, iii) rating requirements for Norwegian corporate bonds have been introduced, iv) a minimum-volume requirement has been introduced for bonds issued by Norwegian banks and mortgage companies owned by Norwegian banks, and v) further provision has been made for collateralisation of asset-backed bonds.

The rules were adopted by Norges Bank in August 2005 once they had been circulated for comment to the Norwegian Savings Banks' Association, the Norwegian Financial Services Association and Kredittilsynet (Financial Supervisory Authority of Norway). The rules entered into force on 24 October 2005, although parts will not apply until 1 November 2007. The changes on 24 October resulted in an increase in banks' borrowing facilities.

2. Norges Bank's previous collateral requirements

Banks can raise two types of ordinary loans in Norges Bank. (See box on borrowing facilities.) The first type is the D-loan (overnight loan), which is used in connection with payment settlements. The other is the F-loan (fixed-rate loan with varying maturity that cannot be terminated), which is used in connection with the implementation of monetary policy.

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² A borrowing quota in relation to a basis of measurement for each bank also applied to D-loans (overnight loans) up to 2001.

³ See section 3.4.

2.1 Norges Bank's lending requirements from 1965 to 1999

Today, Norges Bank requires banks' loans to be fully collateralised. A similar requirement has applied in earlier periods, but in 1965 collateralisation requirements were relaxed.⁴ In 1986, all collateralisation requirements were removed as a result of the currency crisis. At that time, Norges Bank supplied considerable liquidity in order to prevent a sharp increase in money market rates. Norges Bank was thereby left with large unsecured claims on banks that encountered solvency problems during the following years' banking crisis.

After consultation with the political authorities, Norges Bank provided income support in 1988 and 1989 to a savings bank in the form of subsidised interest rates and by writing down loans. In Report No. 24 (1989-1990) to the Storting concerning the banking crisis, the Ministry of Finance stated that "Writing down central bank loans to banks may (...) represent an active use of government funds that should be deliberated by the Storting in advance". The Ministry also assumed that ordinary legislative procedures would be followed in any future crisis situations in Norwegian banks and referred to the schemes established through the guarantee funds. The Standing Committee on Finance endorsed this view in its follow-up in Recommendation no. 90 (1989-90) to the Storting. This served to further clarify the division of responsibilities between the central bank, the guarantee

funds and government authorities in the financial safety net. It was specified in particular that Norges Bank itself shall not increase its risk and impose losses on the state.

It was difficult to reintroduce collateralisation requirements in subsequent years. Banks had large loans but limited holdings of securities that could be used as collateral. The size of banks' loans was reduced in the course of 1993, however, and Norges Bank introduced a requirement for partial collateralisation of D-loans towards the end of the year. Norges Bank introduced a requirement for full collateralisation of D-loans from 1995, and the same requirement was introduced for F-loans in 1999.

In 1999 there was some uncertainty as to whether banks had adequate holdings of bonds that could be used as collateral. As a result, new types of bonds were also approved as collateral in Norges Bank when the requirement for full collateralisation of F-loans was introduced. These included bonds issued by private undertakings within the OECD area, bonds issued by Norwegian undertakings and bonds issued by Norwegian banks. Some of these bonds are less liquid and have lower creditworthiness than bonds approved by Norges Bank before 1999.

2.2 Main features of the 1999 rules

Banks' borrowing facilities were determined by the value of bonds they had furnished as collateral. For a bond to be used as collateral, the issuer had to be

Borrowing facilities in Norges Bank - function

Banks can raise F-loans and D-loans provided they have pledged collateral in favour of Norges Bank. The collateral can apply to both types of loan, so that collateral that has not been used as collateral for an F-loan can be used as collateral for a D-loan. These borrowing facilities serve to ensure the implementation of monetary policy and the execution of payment settlements (see Kran and Øwre, 2001).

Norges Bank's key rate is the sight deposit rate, which is the interest rate on banks' deposits in Norges Bank. Norges Bank ensures that the central bank's interest rate decisions have an impact on short money market rates through its liquidity policy. When banks' overall liquidity shows a surplus at the end of the day, market rates on deposits will not be appreciably higher than the interest rates on deposits in the central bank. Short money market rates are thus slightly higher than the sight deposit rate. Norges Bank will hold auctions of F-loans if forecasts indicate that liquidity must be supplied in order to bring banks into a deposit position. Banks can redistribute liquidity through the interbank market. This market does not, however, function perfectly, and if money market rates are to remain just above the key rate, overall deposits by banks must be of a certain size. If banks' deposits in Norges Bank are too low, the market will normally not be able to meet the requirements of some banks, and these banks will have to resort to overnight loans at an interest rate two percentage points above the key rate. This might result in higher short money market rates. Recently, Norges Bank has set the scale of F-loans to ensure that banks have had total deposits of about NOK 15 billion at the end of the day.

Even if a bank has deposits in Norges Bank at the beginning of the day, the deposits will not necessarily be large enough to meet the bank's requirements in connection with payment transactions in the course of the day. The bank can obtain liquidity to cover payments through a D-loan, which is a drawing right. A D-loan is interest-free if it is repaid in the course of the day.

⁴ For a more detailed description, see Gerdrup (2004)

approved by Norges Bank. Different issuers were approved for Norwegian bonds and foreign bonds (within the OECD). Of Norwegian issuers, the government, state-owned enterprises, municipal authorities, county authorities, banks, mortgage companies and private undertakings were approved. Norges Bank also approved ownership interests in Norwegian securities funds as collateral. Of foreign issuers, Norges Bank approved governments and private undertakings with a satisfactory credit rating.⁵

Bonds issued by Norwegian private undertakings had to be registered in an approved securities depository, be listed on the stock exchange and have a remaining fixed-rate period of no more than 10 years. If the bonds were issued by private Norwegian undertakings without a credit rating, there was an additional requirement that the volume outstanding should be at least NOK 300 million. Bonds from other Norwegian issuers (public authorities, banks and mortgage companies owned by banks) were not subject to requirements related to volume, fixed-rate period or listing on the stock exchange. Bonds with foreign issuers had to have a credit rating, be registered in an approved securities depository, be listed on the stock exchange and have a remaining fixed-rate period of no more than 10 years.

Bonds and notes issued by Norwegian banks and mortgage companies owned by Norwegian banks were subject to a quota arrangement. Under this arrangement, only up to 50 per cent of a bank's total collateralisation could be in the form of these bonds. The quota also included bonds and notes issued by companies where Norwegian banks directly or indirectly owned more than 1/3, and Norwegian bond and money market funds registered in the Norwegian Securities Depository (VPS).

A bond was given a loan value equivalent to the nominal value of the bond less a haircut. The size of the haircut depended on the issuer and on whether the bond was denominated in Norwegian kroner or foreign currency. Haircuts were highest for private Norwegian undertak-

ings without a satisfactory credit rating (25 per cent) and lowest for bonds issued by states within the OECD (5 per cent). Bonds denominated in foreign currency were subject to an additional haircut of 5 per cent.

3. Background for adjustments to Norges Bank's rules

Under the 1999 rules, banks could furnish collateral that exposed Norges Bank to risk, but because the number of Norwegian government bonds issued was limited, liberal rules were necessary. After 1999, however, banks' borrowing facilities have increased in relation to their requirements in connection with payment settlement and monetary policy. The supply of bonds denominated in NOK that are approved by Norges Bank has also increased. In addition, provisions allowing for the rapid realisation of collateral in the Act relating to financial collateral have allowed a transition to market values, and thereby lower haircut rates and higher loan values for banks' collateral. Amendments to the Financial Institutions Act also provide for the issue of collateralised bonds in Norway. This type of bond may be important for banks' collateral arrangements in Norges Bank in the long term. Finally, the IMF (International Monetary Fund) pointed out in its review of the Norwegian financial system in 2005 that collateral in the form of bank bonds should be reduced, and that the same requirements should be applied to a greater extent to issuers of both Norwegian and foreign bonds.

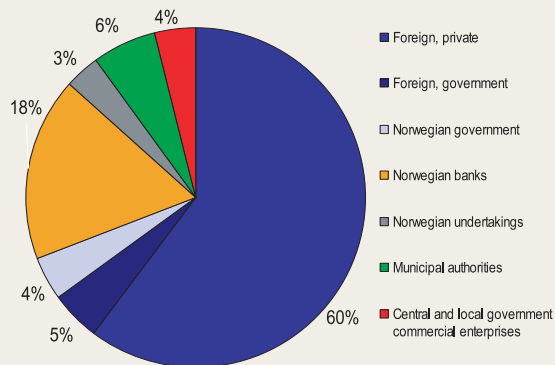
3.1 Transition to market values

The Act relating to financial collateral incorporates the EU Directive on financial collateral arrangements (2002/47/EC) into Norwegian law. The Act provides protection for some financial contracts in the event of a bankruptcy and enables the rapid realisation of collateral. For Norges Bank, this means a lower risk of a reduction in the value of pledged securities before they can be realised. As a result of the Act, it was an advantage for Norges Bank to use market value rather than nominal value when calculating banks' borrowing facilities. With more accurate information about the value of pledged bonds, Norges Bank can reduce the haircut on bonds without increasing its own risk. With the current interest rate, banks' borrowing facilities will also increase since the market value of bonds is typically higher than their nominal value.

3.2 Introduction of asset-backed bonds in Norway

Since 1 January 2004, the Financial Institutions Act has allowed for the issue of bonds secured on financial insti-

Chart 1 Banks' collateral by issuer. Total amount pledged NOK 156 billion



⁵ Only bonds regarded by Norges Bank as ordinary are eligible as collateral. Convertible bonds or indexed bonds, for example, are not eligible.

tutions' total assets.^{6,7} It is relatively common in other countries to raise capital on the bond market for financial institutions' lending through two models developed for the purpose.

The first model involves mortgage companies (mortgage banks) that extend loans for a limited range of purposes, such as house purchases or loans guaranteed by the state, and that finance this activity by issuing bonds. In Norway, such asset-backed bonds will be issued by mortgage companies with a licence to conduct financing activities under section 3-3 of the Financial Institutions Act. The Act includes requirements as to the organisation and operation of the mortgage company, which loans may be included in the portfolio and requirements applicable to the underlying collateral. Special requirements are set out to guarantee bond owners' rights in a bankruptcy situation. The suitability of asset-backed bonds as collateral is thereby supported by legislation.

In the second model, a credit institution sells a group

of claims to a special purpose vehicle (SPV), which issues bonds to finance its purchase (see box). Bonds issued by the SPV are often divided into tranches, with the bonds in the lowest tranche bearing any losses first. The SPV has no activity of its own, and can leave all the administration of these claims to the initial credit institution, a bank or another similar financial institution.

An SPV is not regarded as a credit institution and is not subject to capital adequacy requirements or supervision. Thus, legislation and public regulation will not in itself ensure that bonds issued by SPVs have high creditworthiness. A large share of the bonds issued by SPVs, however, have a high credit rating from Moody's or Standard & Poor's and will be eligible as collateral in Norges Bank.

An SPV need not take over the group of claims itself, but can for example take over the credit risk associated with the claims by using credit derivatives. This is known as a synthetic structure (synthetic Collateralised Debt Obligation, CDO). Bonds from SPVs may have

Credit rating of bonds issued by Special Purpose Vehicles

Bonds issued by SPVs are often termed Asset-Backed Securities (ABS) or Collateralised Debt Obligations (CDO). These bonds give investors rights to the cash flow from an underlying portfolio that is owned by the SPV. The different names depend on whether the underlying types of credit are relatively homogeneous (ABS) or heterogeneous (CDO) with respect to risk. Examples of underlying credit in an ABS can be car loans, consumer credit, credit card loans or mortgage loans.¹ In a CDO, the underlying credit can for example be corporate loans and/or corporate bonds, with exposure to a limited number of parties.

ABSs and CDOs have in common that they are usually split into tranches with different priorities in a loss situation. The tranches are normally called the senior tranche (highest priority), the mezzanine tranche and the equity tranche (lowest priority). In a credit event in the underlying portfolio, the tranches with the lowest priority will bear the first loss. The mezzanine tranche will only be affected by loss if the entire equity tranche is depleted, and the senior tranche only if the entire mezzanine tranche is depleted. With this structure, the likelihood of losses in the different tranches depends on the size of the subordinate tranches.

A bond's credit rating is an assessment of expected loss or the likelihood of default. In an ABS or CDO, the structure can thereby be tailored so that the different tranches achieve a chosen credit rating. The usual arrangement is to ensure that the equity tranche absorbs a large enough share of any losses to allow the mezzanine tranche to carry an investment grade credit rating, and that the equity and mezzanine tranches absorb enough to allow the senior tranche to carry an AAA credit rating. Credit rating agencies' assessment is largely model-based, and the arranger of the issue tailors the structure so that expected losses in each tranche are at the level required to achieve the desired rating. The most important parameters in the model are estimates of creditworthiness and recovery rates in the underlying portfolio. For CDOs, where exposure is limited to a few names, the correlation between instruments in the portfolio will also be important.

An investment's risk profile depends on expected losses and uncertainty associated with these losses. A combination of expected losses and an assessment of this uncertainty (variance) therefore provides a better description of the risk profile than expected losses alone. The uncertainty associated with loss is usually called unexpected loss. Analysing unexpected loss is particularly important for ABS and CDO tranches because the division into tranches may result in a loss distribution that deviates considerably from the distribution in a bond portfolio with the same average rating. An important implication is that a credit rating provides an incomplete picture of the risk associated with debt instruments, and quality requirements based on credit rating may be less effective in limiting risk in portfolios containing ABS and CDO tranches than in portfolios containing traditional bonds only.

¹ Bonds issued against collateral in the form of residential and commercial property loans are often called Mortgage-Backed Securities (MBS).

⁶ For a more detailed description, see Andresen and Gerdrup (2004). Norwegian only.

⁷ The legal framework for asset-backed bonds is not yet complete. These bonds have therefore not yet been issued by Norwegian mortgage companies.

high creditworthiness and be liquid, but assessment of the risk associated with them often involves the use of new methods that have not been adequately tested.⁸ They may therefore be less suitable as collateral than other types of bonds issued by SPVs.

3.3 Collateral that does not provide adequate risk reduction for Norges Bank

Norges Bank has applied more liberal requirements to bonds issued by Norwegian undertakings than to bonds issued by foreign undertakings. In some cases, bonds issued by private Norwegian undertakings have been approved even though Norges Bank has thereby been exposed to some risk. These have, for example, included some Norwegian corporate and bank bonds.

In the previous rules, Norges Bank did not require Norwegian corporate bonds to carry a credit rating. There were thereby no objective and accepted criteria available to Norges Bank to allow rejection of corporate bonds with a low credit rating. In practice, therefore, these bonds were approved as collateral even if they had been issued by undertakings in financial difficulty. Norges Bank thus risked being left with collateral that was difficult to realise if a bank was placed under public administration. It was therefore necessary to include a credit rating requirement for Norwegian corporate bonds in the new rules.

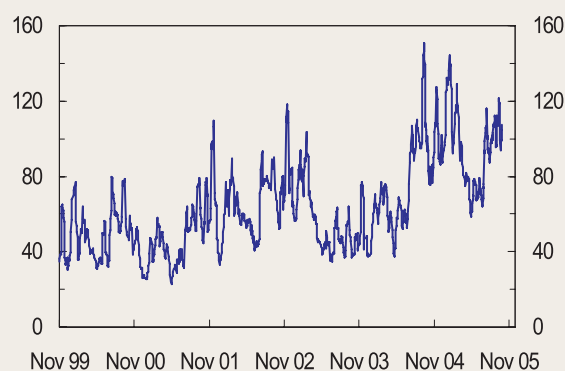
Bank bonds will often have high creditworthiness. The disadvantage of these bonds is that the borrower and issuer of the bonds may encounter difficulties at the same time. This may be the case during a banking crisis, for example. Norges Bank has therefore restricted the use of these bonds as collateral to 50 per cent of a bank's borrowing facility. A number of banks made full use of this quota. Norges Bank therefore regarded the risk associated with collateralisation of bank bonds as high, and wished to place further restrictions on the use of these bonds as collateral. This assessment also indicated that these bonds should to a greater extent be subject to the same requirements as other bonds with private issuers. In its review of the financial system in Norway, the IMF also recommended that the quota for bank bonds should be further reduced from 35 per cent, a reduction Norges Bank will be introducing from November 2006. For more details on requirements with regard to bank bonds, see section 4.5.

3.4 Higher disposable resources in Norges Bank

Norges Bank has accepted bonds with a certain level of risk because banks' borrowing facilities in Norges Bank might otherwise have been inadequate. However, the

aim of Norges Bank has been to reduce the use of these bonds as collateral. In recent years, there has been not only a considerable rise in collateral levels but also an increase in banks' deposits in Norges Bank. However, turnover in the payment settlement system and the need for collateral for F-loans have not increased to the same extent. Furthermore, banks' borrowing facilities will increase as a result of the transition to market value and the reduction in haircut rates, see 3.1 and 4.2. There was therefore scope for adjustment in the rules without negative implications for the conduct of monetary policy or payment settlement.

Chart 2 Disposable funds in Norges Bank's settlement system (NBO) as a percentage of turnover¹⁾. Moving 10-day average



¹⁾ The days before and after 31 December 1999 are not included because of unusually low turnover in NBO

Source: Norges Bank

3.5 Changes in liquidity reserve requirement

Most small and medium-sized banks utilise a very small portion of the borrowing facility at Norges Bank for payment settlement, and do not normally raise F-loans. It therefore seems likely that these banks pledge collateral in Norges Bank in order to meet official liquidity requirements.⁹ The Norwegian Savings Banks' Association has also pointed out that for smaller savings banks it is important to view the consequences of the new collateralisation rules in the context of the liquidity requirement. The Ministry of Finance has announced that the quantitative liquidity requirement will be replaced by a general requirement stating that banks must have adequate liquidity to meet their commitments. Such a change in the liquidity requirement will reduce the need for these banks to maintain a borrowing facility.

⁸ Cousseran and Imène (2005).

⁹ The regulations concerning minimum liquid reserve requirements for commercial and savings banks (No. 1222 of 16 December 1988) require banks to hold at least six per cent of a basis of measurement as liquid funds.

4. Amendments to the rules

Norges Bank has drawn up new rules on the basis of the developments outlined above. Many adjustments have been made to the rules, but only the most important are dealt with in this section. The previous and the current rules are both available on Norges Bank's website.¹⁰

4.1 Transition to market value

Norges Bank replaced nominal value with market value as a basis for calculating banks' borrowing facilities on 24 October 2005 (see box). As a result, banks' borrowing facilities are closer to the value of the securities pledged as collateral in favour of Norges Bank. With calculations based on market value, a bank might find itself in an uncollateralised borrowing position as a result of changes in bond prices. Banks in this position will be requested to increase their collateral or reduce their loans by the end of the day. Banks that have not covered their position by the end of the day, will receive an uncollateralised D-loan (overnight loan), and penalty interest will accrue.

4.2 Reduced haircut rates

Haircut rates for all bond categories have been reduced and will now depend on the issuer and the remaining fixed-rate period. Bonds are divided into three categories depending on the credit risk for the different issuers, and four categories according to the period remaining to maturity or the next interest rate adjustment (lowest haircut rate for bonds with the shortest period remaining to the next interest rate adjustment). This means that the rules will operate with twelve haircut rates.

Haircut rates for virtually all bonds will be reduced compared with the rates in the previous rules. How much haircut rates will be reduced on average depends on which securities banks have pledged at the time this is measured. An estimate before the changes were implemented showed that average haircut rates would be reduced from 16 per cent to slightly below 8 per cent. The estimate includes the haircut for foreign exchange, which would be reduced from 5 to 3 per cent.

4.3 Asset-backed bonds

Asset-backed bonds are no longer included in the quota for bank bonds, and a bank may pledge asset-backed bonds as collateral even if it owns the mortgage company that issued the bonds. In addition, asset-backed bonds that are issued by Norwegian mortgage companies will not be subject to the volume or credit rating requirements in the transitional period, which lasts until 1 November 2007.

4.4 Special purpose vehicles (SPVs)

Norges Bank still accepts bonds issued by SPVs, provided they are in the upper tranche. It is also a requirement that bonds are not linked to credit derivatives (synthetic CDOs are not eligible).

4.5 Requirements applicable to bank bonds

Norges Bank is introducing the requirement that bank bonds must have an outstanding volume of NOK 300 million, and that bonds must be registered on a stock exchange or an alternative marketplace approved by Norges Bank. The quota for bank bonds is also being reduced. As of 24 October 2005, the quota was set at 45 per cent. It will be reduced to 40 per cent from 2 May 2006, and to 35 per cent from 1 November 2006. Bank bonds will continue to be exempt from the credit rating requirement.

4.6 Credit rating and corporate bonds

Norges Bank has introduced a credit rating requirement for Norwegian corporate bonds. The requirement is set at BBB- from Standard & Poor's (S&P) or Baa3 from Moody's (also known as investment grade). Corresponding requirements for bonds with foreign issuers will continue to be A from S&P, or A2 from Moody's. In contrast to foreign issuers, Norway also accepts credit ratings of an issuing institution and not only credit ratings of the bond itself. Norwegian corporate bonds with a credit rating lower than A and A2 will be subject to an extra haircut.

4.7 Issuers home country and currency

The requirement that a bond must be issued by an undertaking or country within the OECD no longer applies. All bonds from foreign issuers are required to have a satisfactory credit rating, although government-guaranteed bonds may be exempt from this requirement following an evaluation. For bonds with issuers resident outside the EEA, Norges Bank may need legal confirmation that there are no problems associated with for example realisation of collateral. Any costs of obtaining such confirmation will have to be covered by the pledging bank.

Norges Bank is introducing requirements that bonds and notes must be denominated in NOK, SEK, DEK, EUR, USD, GBP, JPY or CHF. This is a smaller number of currencies than in the previous rules, in which all OECD currencies were accepted by Norges Bank.

¹⁰ See circular no. 8/2005 and no. 2/2003.

Transition to market value

Norges Bank has replaced nominal value with market value as a basis for calculating banks' borrowing facilities. The transition required substantial changes in Norges Bank's systems. Solutions had to be developed to enable available market rates to be recorded on a daily basis, and to determine a synthetic value for bonds for which updated market rates are not available. Norges Bank's treatment of pledged bonds now also varies somewhat, depending on where the collateral is registered.

Securities pledged as collateral in the Norwegian Securities Depository (VPS)

The VPS provides a daily report of the latest market rates on the Oslo Stock Exchange for securities pledged as collateral. If a long period has passed since a security was last traded, the last market price will not necessarily reflect the security's current value. In these cases, Norges Bank will assign a price equal to the estimated current value of the bond. The price will normally overestimate the bond's value as credit and liquidity risk are not taken into account. The haircut rates applied by Norges Bank to securities pledged as collateral are, however, set on the basis of assumptions concerning differences in creditworthiness and liquidity for different categories of issuer. Norges Bank will therefore also assign an appropriate loan value for bonds without an updated market price.

Securities pledged in another approved securities depository

For securities pledged in foreign securities depositories approved by Norges Bank, Norges Bank buys price information from Financial Times Interactive Data (FTID). FTID provides market prices from international stock exchanges and from direct trades between market participants that report to the International Capital Market Association. In addition, FTID delivers synthetic prices made by the company's analysts. For some kinds of securities, however, FTID does not deliver synthetic prices. This applies, for example, to some bonds secured on lending portfolios. Norges Bank is therefore exposed to a risk that neither an updated market price nor a synthetic price is available for a security. A floating-rate security does not pose a problem as its value will normally be close to its nominal value. Norges Bank will then utilise the nominal value with an additional haircut depending on the security's credit rating. For fixed rate securities, the value of the security might differ considerably from its nominal value. Such securities are therefore not eligible as collateral.

5. Consequences of the new rules

The aim of the new rules is to reduce Norges Bank's risk exposure. The transition to market value and reduced haircut rates has, however, resulted in an increase in banks' total borrowing facilities. The increase in banks' borrowing facilities will be sharpest in the transitional period (from 24 October 2005 to 1 November 2007) and will affect all or virtually all banks. The immediate effect of the implementation of the new rules, was that borrowing facilities increased by about 14 per cent. After the transitional period, some types of bonds will no longer be eligible as collateral, and it will therefore be necessary for some banks to pledge new bonds if they wish to maintain their borrowing facilities at the current level. For banks as a whole, borrowing facilities will probably be higher than under the previous rules, even if bonds that are no longer eligible are not replaced.

The fact that some bonds are no longer eligible as collateral at Norges Bank may make it more expensive for

some bond issuers to raise loans in the bond market, as the demand for a bond may decline if it cannot be used as collateral. This effect will be limited since only a small portion of these bonds are pledged in Norges Bank.

Changes normally occur in banks' collateralisation on a daily basis. It is therefore difficult to make an accurate calculation of how banks' borrowing facilities will be affected when the transitional period ends on 1 November 2007. All calculations have been based on banks' collateralisation in the period before the new rules were introduced. This means that it has not been taken into account that banks will adapt to the new rules or change their collateralisation for other reasons up to end-2007. Furthermore, it has not been taken into account that banks' need to maintain their borrowing facility may be reduced if the quantitative liquidity requirement no longer applies.

5.1 Norges Bank's risk exposure

Norges Bank's exposure to risk will be reduced by tightening the requirements concerning certain types of bonds before they are approved as collateral. This primarily applies to Norwegian corporate and bank bonds. Under the previous rules, corporate bonds could be approved without a credit rating, but the new rules require either the bonds or the issuers to be rated by Standard & Poor's or Moody's. Corporate bonds with low creditworthiness have not been utilised as collateral to any great extent, but a bank could in principle have used such bonds as collateral for all its borrowing. The credit rating requirement has therefore resulted in a substantial reduction in Norges Bank's risk exposure.

Norges Bank has also reduced risk exposure associated with bank bonds. Financial problems may arise in several Norwegian banks at the same time, and it is therefore a disadvantage for one bank to use bonds issued by another bank to secure its borrowing. Up to 24 October, the use of bank bonds as collateral was limited as these bonds could not account for more than 50 per cent of banks' total collateral. Under the new rules, this quota will be gradually reduced to 35 per cent. A volume requirement of NOK 300 million for bonds issued by banks and mortgage companies is also being introduced. This will improve the liquidity of bank bonds pledged as collateral in favour of Norges Bank.

5.2 Banks as borrowers

The new rules allow banks to pledge some types of bonds that were not eligible under the previous rules. For example, Norges Bank may accept bonds without a credit rating if they are government-guaranteed, notes (in addition to bonds) from private issuers if they have a satisfactory credit rating, and bonds from issuers in non-OECD countries. More importantly, however, Norges Bank has made it easier for banks to pledge asset-backed bonds. These bonds are no longer included in the quota for bank bonds, and banks will be permitted to pledge asset-backed bonds issued by a mortgage company in the same corporate group. For most Norwegian banks, the effect of these rules will be limited in the short term because asset-backed bonds are not yet issued in Norway. In the longer term, however, the volume of such bonds is expected to increase.

The quota for bank bonds is being reduced to 35 per cent from 1 November 2006, and from 1 December 2007 a minimum volume of NOK 300 million will also be required for bank bonds used as collateral in Norges Bank. For banks as a whole, these changes will mean that more than 8 per cent of current collateral can no longer be used. This will in isolation reduce banks' borrowing facilities, although the reduction is less than the increase in borrowing facilities from 24 October 2005. Thus, it will not be necessary for most banks to adjust

their collateral in order to maintain their borrowing facilities at the current level.

Small and medium-sized banks (the 105 smallest), however, have collateralised a larger share of their borrowing using bank bonds than other banks. Based on collateralisation under the new rules, it is estimated that over 40 per cent of the bonds pledged by these banks will no longer be eligible.¹¹ Some of the reduction in borrowing facilities will be offset by a reduction in haircut rates, but it is reasonable to assume that banks will have to increase the collateralisation of other bonds by approximately 35 per cent or more than NOK 2 billion to maintain their borrowing facilities at the current level.¹² Such an increase in collateralisation will have to be effected in the period to 1 November 2007. Few of these banks raise loans in Norges Bank today, however. It is therefore conceivable that they will choose not to maintain their borrowing facilities at the current level if the quantitative liquidity requirement is discontinued.

Small and medium-sized banks primarily invest only in the Norwegian market. Approximately NOK 500 billion in Norwegian bonds that satisfy the new requirements from Norges Bank have been issued to date. Banks that wish to maintain their borrowing facilities should therefore not find it difficult to replace bonds that are no longer eligible. However, these banks may have to invest in bonds that involve a lower return and lower risk than the bonds they currently own.

5.3 Consequences for bond issuers

The changes in the rules may affect two groups of issuers in particular. The first group is small and medium-sized banks that issue bonds with a minimum volume below NOK 300 million. The second comprises Norwegian undertakings that do not satisfy the investment grade credit rating requirement from Moody's or Standard & Poor's. When bonds issued by these undertakings are no longer eligible, it may be more costly for them to raise loans in the bond market.

The effect for these issuers, however, will be reduced since only a small share of the bonds they issue are used as collateral in favour of Norges Bank. When the new rules came into effect, Norwegian banks had issued approximately NOK 90 billion in bonds that did not satisfy the minimum volume requirement. Of these, NOK 14 billion were pledged as collateral in favour of Norges Bank. Norwegian undertakings had issued more than NOK 60 billion in bonds, and collateralisation of these bonds came to NOK 8.2 billion. The majority of these bonds – over NOK 7.2 billion¹³ – were moreover issued by undertakings that have or would probably have been eligible for a satisfactory credit rating, so that these bonds can still be pledged as collateral.

¹¹ This estimate is uncertain. It will, for example, depend on which Norwegian undertakings receive a satisfactory credit rating from Standard & Poor's or Moody's.

¹² This depends to a certain extent on how many Norwegian undertakings obtain a credit rating from Standard & Poor's or Moody's.

¹³ Source: Norges Bank and DnB NOR Markets Kredittanalyse.

6. Summary

Since the bond market in Norway is relatively small, Norges Bank has accepted a broad range of bonds as collateral since 1999. This has facilitated payment settlement and the implementation of monetary policy. With regard to Norges Bank's exposure to risk, however, it has been a drawback that the rules have permitted the use of bonds that could have limited liquidity or creditworthiness in periods of financial unrest. This implied that Norges Bank should make adjustments in the rules when banks had ample liquidity.

Banks' balances and borrowing facilities in Norges Bank have gradually increased in recent years. Moreover, the transition from nominal value to market value has resulted in a further increase in banks' borrowing facilities in Norges Bank. In the somewhat longer term, banks' supply of securities with high credit ratings may also increase as a result of the possibility of issuing asset-backed bonds in Norway. Against this background, Norges Bank has implemented some changes in the rules in order to limit its exposure to risk.

The changes will have an impact on banks as borrowers in Norges Bank. After the transitional period, the borrowing facilities for small and medium-sized banks may be reduced to a certain extent. Norges Bank's estimates, however, show that the 100 smallest banks only need to increase their collateralisation by NOK 2 billion in order to maintain their borrowing facilities. If the quantitative liquidity requirement is discontinued, it is also conceivable that some banks will not see a need to maintain their borrowing facilities at the current level. Overall, the new rules will probably result in a slight increase in banks' borrowing facilities which will continue after the transitional period.

The change in the rules may have an impact on two types of issuer. One is Norwegian undertakings without satisfactory credit ratings and Norwegian banks and mortgage companies owned by Norwegian banks that issue bonds of less than NOK 300 million. Such bonds will no longer be eligible as collateral, and it may therefore be more costly for the issuers to raise loans. The effect of the change will, however, be limited since only a small portion of these bonds are pledged in Norges Bank.

The changes in the rules have resulted in reduced risk for Norges Bank. In the long term, additional changes will be made in order to reduce Norges Bank's risk even further. The most important of these will probably be that the quota for bank bonds will be reduced to a level that is substantially lower than 35 per cent, although stricter requirements may also be applied to Norwegian corporate bonds.

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