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Liquidity in the Norwegian bond and certificate market in the first half of 2020

The coronavirus outbreak and the pandemic that followed contributed to considerable volatility in Norwegian financial markets in March 2020. For a period, liquidity in the Norwegian bond and certificate market deteriorated markedly. According to Norges Bank's market liquidity survey for the first half of 2020 and information from market participants, an imbalance arose between buyers and sellers which was amplified by higher margin requirements in FX swaps. Market data confirms that this had a significant impact on bid and ask prices. The gradual reopening of society and measures introduced by Norges Bank in March, in the form of extraordinary F-loans and changes in collateral requirements for loans, contributed to improving market conditions in the period to summer.

1. Introduction

Norges Bank monitors liquidity in the bond and certificate market through regular contact with market participants, quantitative data analyses and investor and market maker surveys. This memo examines liquidity in the Norwegian bond and certificate market in the first half of 2020, when the Covid-19 pandemic led to substantial market volatility in Norwegian and global financial markets. The survey was conducted in September and has been supplemented with market data and qualitative information obtained through market intelligence.

There are several reasons why it is of use to Norges Bank to monitor and analyse liquidity in the bond and certificate market. First, Norges Bank is tasked with contributing to well-functioning financial markets to promote financial stability and ensure the transmission of the policy rate to market rates. The bond market is an important source of funding for banks and non-financial corporations. Bonds and certificates are also important investment alternatives for asset managers who manage, for example, pension funds. Thus, the bond market is important for household loans and savings and the interest rates households face.

Second, Norges Bank manages government borrowing. In addition to funding state banks and government lending schemes, government debt management promotes efficient financial markets by establishing a basis for a risk-free yield curve in the Norwegian market. It is therefore of interest to monitor liquidity in the government debt market, for example by means of market liquidity surveys.

Third, market liquidity affects the value of the securities required by Norges Bank as collateral for loans to banks. Norges Bank extends loans to banks as part of the liquidity management system and can also offer extraordinary loans, as it did during the market turbulence in March. In addition, Norges Bank has a standing overnight lending facility and is the lender of last resort. Banks post collateral in the form of securities. According to the guidelines for pledging collateral for loans from Norges Bank, only securities with low credit risk are approved. As a substantial share of the securities approved as collateral are also floating rate instruments, the securities that are eligible as collateral at Norges Bank generally involve low credit and interest rate risk. Daily valuations of the securities further reduces risk. Nevertheless, there is a risk of market volatility owing to changes in market liquidity. An important part of Norges Bank's risk management is therefore to ensure that haircuts in collateral requirements take into account liquidity risk.

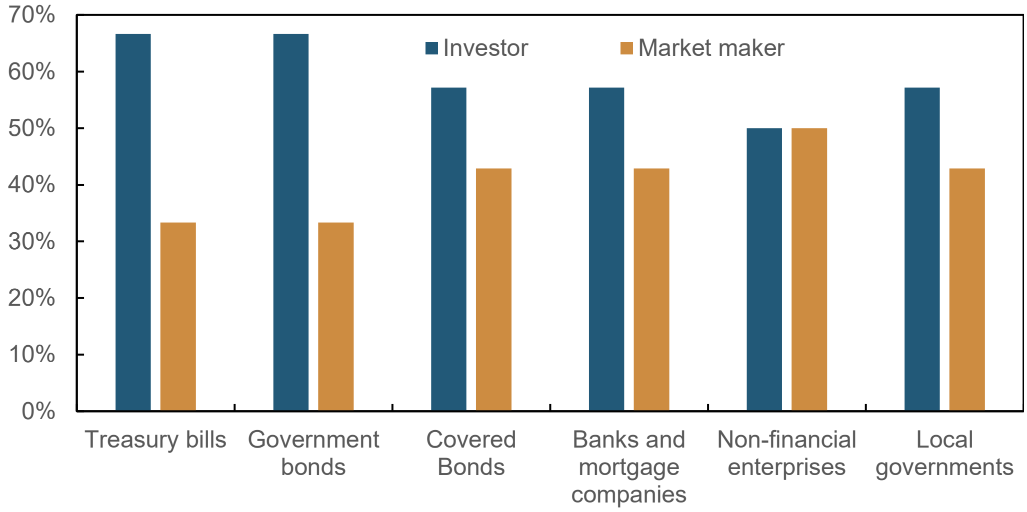
2. Market liquidity survey for the first half of 2020

Norges Bank conducts a survey among market participants on liquidity in the Norwegian bond and short-term paper market twice a year.[1] The purpose of the survey is to gain information on respondents' assessment of market liquidity, which can provide insight in addition to the information provided by market data such as turnover and prices. Results from this survey are a valuable supplement to the information Norges Bank receives through its regular contact with market participants and estimated quantitative measures of market liquidity.

The market liquidity survey covers the following sub-markets: government bonds, Treasury bills, covered bonds, and bonds and certificates issued by local governments, non-financial enterprises and banks and mortgage companies. The survey is sent to investors and market makers that are active in the Norwegian market and contains questions that are repeated each year in addition to certain special topics that are prepared for each survey. Thus, respondents' liquidity assessments can be systematised and compared over time, at the same time as questions can be focused on relevant market topics. The respondents are investors or market makers in one or more sub-markets. See distribution in Chart 1.

[1] The survey was not conducted for the second half of 2019

Chart 1. Share of respondents that are investors or market makers in each sub-market. Percent.

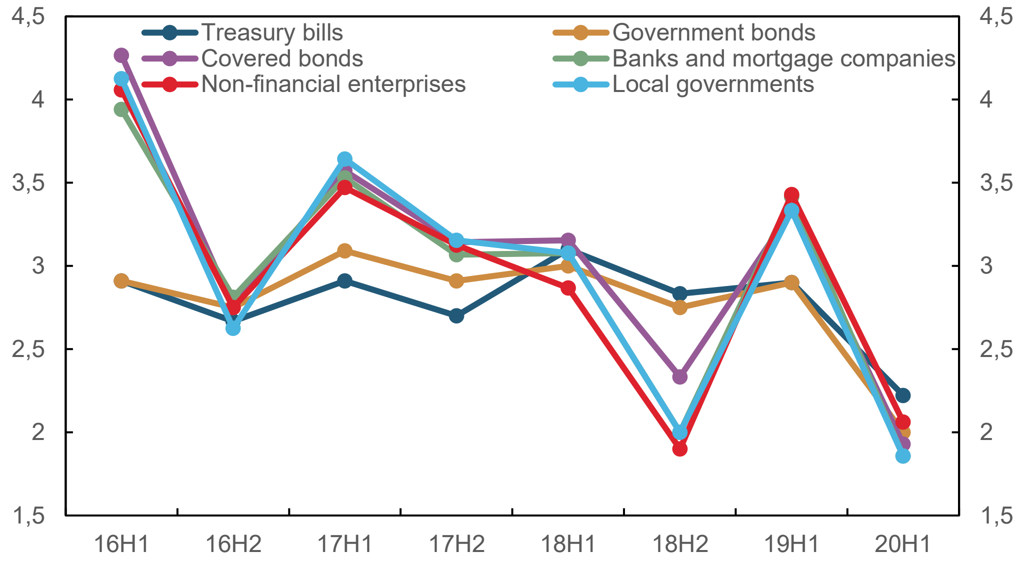


The survey for the first half of 2020 was conducted in September 2020 and consisted of ten questions. In addition to the regular questions, respondents were asked to assess the Norwegian bond market during and after the market turmoil caused by the Covid-19 pandemic. Sixteen market participants answered the survey and their answers reflect the turbulent period in the market caused by the pandemic. In this part of the paper, we review the answers to the most central questions in the survey.

All the respondents answer that liquidity in all sub-markets deteriorated or was unchanged in the first half of 2020 compared with the second half of 2019. The respondents are asked to answer on a scale from one to five, where three indicates that liquidity in the past half-year was unchanged from the preceding half-year, while a lower number means that liquidity deteriorated. Liquidity in the market for unsecured bank bonds deteriorated most, while Treasury bills were considered to have shown the least change (Chart 2). This is also supported by one respondent's comment saying that the market functioned better for Treasury bills than for other bonds and certificates during the market turbulence in March.

Chart 2: "What is your assessment of liquidity over the past half-year compared with the preceding half-year"

Average of responses. Scale 1-5. 2016 H1 – 2020 H1

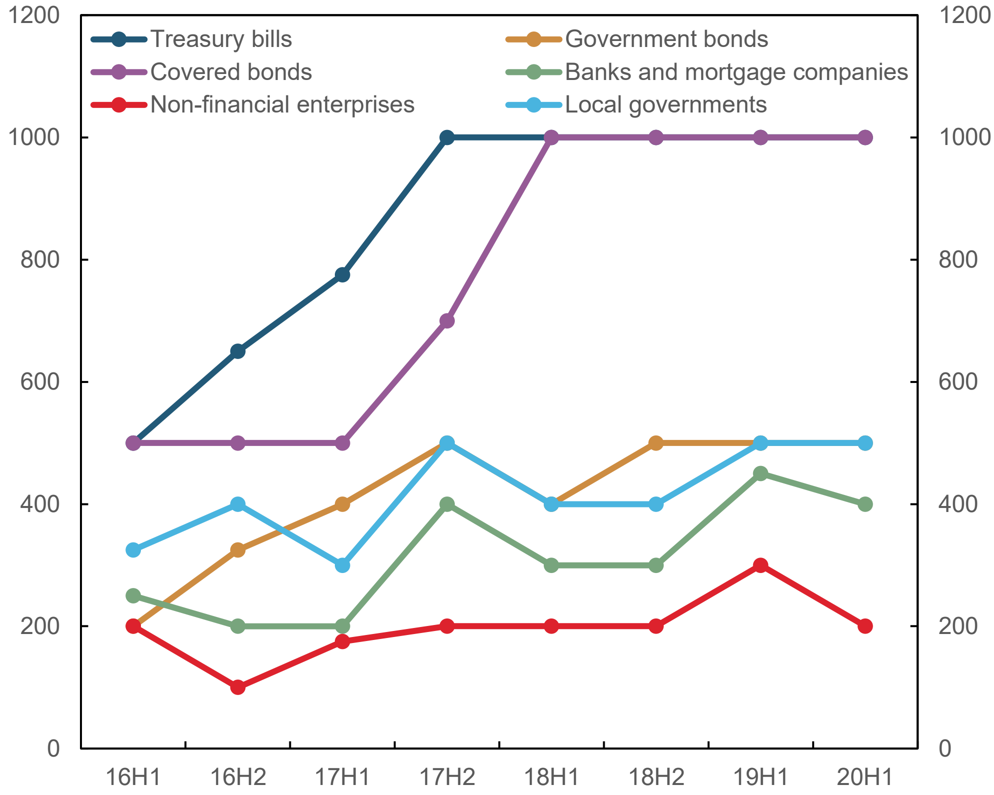


Most respondents experienced that the bond market in Norway was less liquid than bond markets in other countries in this period. To explain this, some respondents point to the krone depreciation and one respondent refers to the smaller number of market participants trading in Norwegian securities than in corresponding markets in other countries. However, the picture is not completely consistent, and according to one respondent, liquidity in the Norwegian market is generally ample during crises compared with the euro market.

Compared with the survey for the first half of 2019, the survey for the first half of 2020 shows small changes in the respondents' assessment of the volume of a single bond that can be traded in the course of a day without causing significant price movements (Chart 3). The volume that can be traded is somewhat lower for unsecured bonds issued by banks and non-financial enterprises. These are also the sub-markets in which low trading volumes have previously affected prices most.

Chart 3: "In your assessment, what volume of a single bond can be traded in the course of a day in the secondary market without causing significant price movements?"

Median. In millions of NOK. Between 2016 H1 and 2020 H1



There may be several reasons why the volume of a single bond that can be traded without causing significant price movements is little changed in a half-year that includes the market turbulence in March. Respondents may, for example, assess market depth from a slightly longer-term perspective and regard the period of poor liquidity in the market as relatively short-lived. Respondents report that the pandemic has been the most important factor affecting market liquidity negatively over the past half-year. Several refer to the krone depreciation, which resulted in liquidity being tied up as collateral, as an amplifying negative effect. A number of respondents mention that Norges Bank's liquidity measures, especially in the form of extraordinary F-loans, had a stabilising effect on the market. According to several respondents, the establishment of the Government Bond Fund had a positive impact on market liquidity. Many respondents have experienced an improved market sentiment in recent months, and a couple describe a strikingly rapid improvement in market conditions. However, one respondent answers that fixed rate bond market liquidity is still weaker than before the Covid-19 outbreak because brokers are more reluctant to quote prices in this sub-market. One respondent describes a gradual improvement in the government bond market, but with fewer active investors than previously – particularly foreign investors. A number of respondents report that liquidity improved faster in the Norwegian market than in foreign markets and that liquidity was slower to recover in the Swedish market in particular.

The general view among respondents is that no substantial, permanent change in trading patterns, liquidity or behaviour in the Norwegian bond market is expected as a result of the pandemic. Nevertheless, a number of respondents refer to the possibility that investors will adapt to reduce their vulnerability to high levels of exchange rate volatility. They suggest that margin requirements for derivative contracts should be more flexible to give market participants alternatives other than having to sell bonds when exchange rate volatility is high, as observed in March. One respondent holds the view that investors will be more cautious about holding USD-dominated bonds. Some respondents comment that investors purchasing high-yield bonds will likely place greater emphasis on portfolio liquidity, for example by having a larger share of cash, a larger share of high-quality liquid assets and a lower share of foreign currency-denominated bonds. None of the respondents expect substantial, permanent changes in the trading of securities issued by the government or local government or in covered bond trading.

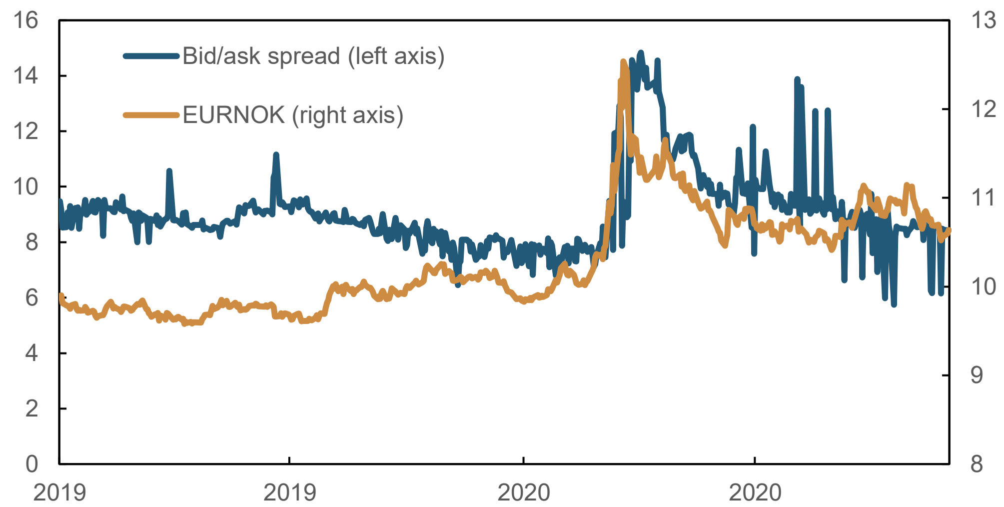
Looking ahead, the primary risk factor appears to be renewed market turbulence, in addition to a weaker krone and a new round of divestment to meet margin calls on currency hedges. One respondent also points to lower willingness among banks to provide liquidity and take on risk in the bond market as a risk factor ahead.

There are still few respondents trading in the Norwegian repo market. Of those that are active, most report that although the covered bond repo market has functioned well over the past half-year, the government bond repo market is still less liquid than before the pandemic. Three respondents conduct all their repo trades with Norwegian banks and mortgage companies, and two respondents conduct most of their trading with “other foreign financial market participants”, which does not include banks and mortgage companies.

3. Other information about market liquidity

The market liquidity survey indicates that the Covid-19 pandemic has had a substantial impact on liquidity in the Norwegian bond market over the past half-year. This is in line with information from Norges Bank’s market intelligence, where our contacts reported a substantial deterioration in market liquidity in mid-March. Asset managers were forced to sell parts of their bond holdings to meet margin calls on currency hedges when the krone depreciated abruptly and sharply. Large Nordic banks operate as market makers in the bond market and redistribute buying and selling interests among the other market participants. When the imbalance between buyers and sellers increased in March, uncertainty increased as to when and whether market makers would be able to find buyers. Increased risk and higher funding costs on banks’ own balance sheets resulted in wider bid/ask spreads on their own holdings. Chart 4 shows the bid/ask spread as a share of the mid-price for Norwegian covered bonds. The chart shows a sharp increase in the bid-ask spread in the first half of March when the spread almost doubled over just a few days.

Chart 4: Bid/ask spread as a share of the mid-price for covered bonds in the Oslo Børs Covered Bond Benchmark List. Average of all ISINs. Basis points. EUR/NOK exchange rate. Number of NOK per EUR. 2019-2020



Source: Bloomberg

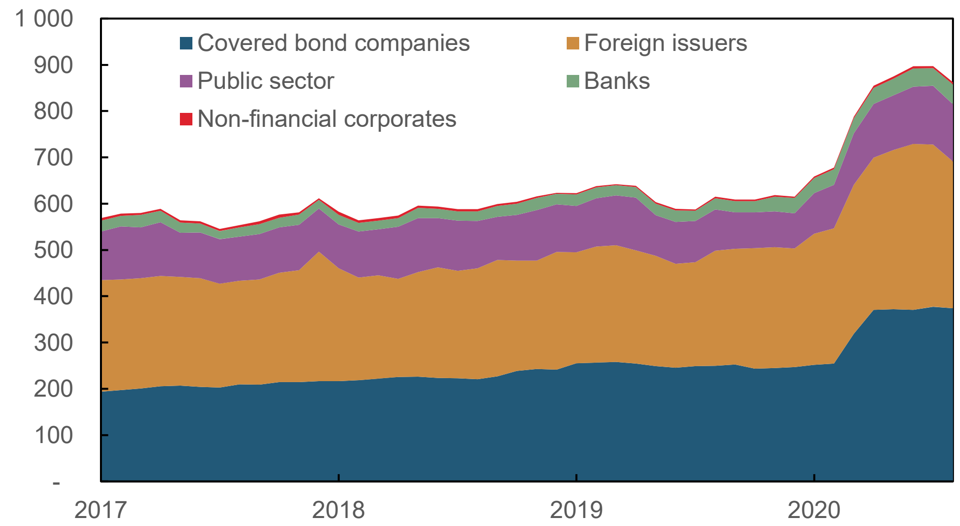
In mid-March, Norges Bank launched a number of extraordinary market operations to ensure the transmission of the policy rate and improve market liquidity. As of March, Norges Bank offered extraordinary three-month F-loans, and on 19 March, the Bank offered additional F-loans to cover maturities of up to 12 months. Norges Bank also announced on 19 March that it would intervene in the foreign exchange market, and over the following days, the Bank made extraordinary NOK purchases totalling NOK 3.5 billion. In addition, on 18 March, Norges Bank's collateral requirements for loans to banks were eased; for example, banks were permitted to pledge up to 100 percent of each individual ISIN. This allowed banks more room to purchase securities from asset managers and to fully finance covered bond issuances by their own mortgage companies using F-loans from Norges Bank.

In the bond market, bid/ask spreads continued to widen between 13 and 18 March before tightening markedly on 19 March. Over the following days, spreads widened sharply again before falling back through April and May. Spreads have continued to tighten since May, but there have been days with substantial volatility. Even though bid/ask spreads have narrowed since spring, the average spread has so far in the second half of 2020 been wider than before the market turbulence. As mentioned above, banks' capacity and willingness to offer liquidity is one of the risk factors going forward that was highlighted by some respondents in the survey.

In the period between March and May, bid/ask spreads closely tracked the krone exchange rate, which may be because both are affected by general risk sentiment in Norwegian and foreign financial markets, but likely also by the mechanisms referred to above. To the extent Norges Bank's extraordinary NOK purchases, both the announcement and the actual purchases, improved the balance between buyers and sellers in the NOK foreign exchange market, the purchases likely also contributed to a better balance in the Norwegian bond market.

As mentioned above, a number of respondents in Norges Bank's market liquidity survey stated that the extraordinary F-loans improved liquidity in the bond market. The banking statistics also show that banks increased their securities holdings by NOK 185 billion between the end of February and the end of August (Chart 5). Most of the increase occurred in March and April, and approximately half of this increase was due to banks' purchases of an estimated NOK 100 billion in new covered bonds issued by their own mortgage companies. These bonds were partly pledged as collateral for loans from Norges Bank. Anecdotal information from market participants suggests that the F-loans were used to buy back banks' own senior bonds with short residual maturity in addition to covered bonds, municipal bonds and other bonds that were eligible as collateral. The banking statistics show an increase in holdings of bonds from all issuers, including bonds that were not eligible as collateral for loans from Norges Bank. For example, banks increased their senior unsecured bank bond holdings by about NOK 10 billion.

Chart 5: Norwegian banks' holdings of bonds and short-term paper by issuer sector. In millions of NOK. 2017-2020



Source: Statistics Norway

4. Summary

The results of the market liquidity survey for the first half of 2020 are consistent with other information on liquidity in the Norwegian bond and certificate market. Respondents report that an imbalance between buyers and sellers in March resulted in a deterioration of market liquidity. At the same time, Norges Bank's measures, in combination with a general improvement in risk sentiment in April and May, are identified as a reason for the rebound in liquidity. A number of respondents comment that liquidity is vulnerable to renewed market turbulence ahead, emphasising in particular banks' capacity to offer liquidity and new rounds of higher margin requirements imposed by funds on FX swaps.