How does Norges Bank influence interest rates?

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Introduction

The most important instruments of monetary policy are Norges Bank's key rates and management of liquidity in the Norwegian banking system. This spring and summer *Finansavisen* has commented and discussed Norges Bank's liquidity policy. In this article I will explain how Norges Bank steers interest rates and liquidity.

Norges Bank sets the interest rates on commercial and savings banks' deposits and overnight loans with Norges Bank and is a settlement bank for interbank transactions. At the end of each day, after all transactions have been settled, any excess liquidity in the banking system is transferred to the banks' sight deposits in Norges Bank. Similarly, banks must borrow from Norges Bank overnight if liquidity in the banking system is insufficient.

The shortest money market rates - day-to-day money- indicate the price of available liquidity. Changes in Norges Bank's deposit and overnight lending rates will normally have a strong influence on these rates. Banks can automatically borrow liquidity from Norges Bank and deposit any available liquidity with the Bank. Thus, the shortest market rates will not normally fall below Norges Bank's deposit rate or exceed its overnight lending rate. If there is a substantial excess of liquidity the market rate will fall, approaching Norges Bank's sight deposit rate. Similarly, the rate will rise towards Norges Bank's overnight lending rate if there is little surplus liquidity.

If Norges Bank's forecasts for changes in banks' liquidity from day to day indicate that banks as a whole will experience insufficient liquidity or considerable excess liquidity, the central bank will supply or withdraw liquidity through market operations. The banks will then be offered loans or deposits, normally with a maturity of a few days up to one week. The interest rate on the liquidity that is supplied or withdrawn through market operations is as a main rule set by auction, at a rate usually established between the deposit and overnight lending rates.

Norges Bank uses F-deposits (fixed-rate deposits) to mop up liquidity. The Bank supplies liquidity though three different types of market operations: F-loans (fixed-rate loans), repurchase agreements and currency swaps, which differ among other things with regard to the security Norges Bank requires of the banks for the loan. Banks must furnish collateral in the form of securities for repos. For currency swaps, banks are supplied liquidity in NOK in exchange for foreign currency. To date, F-loans have been provided without collateral, but from 1 September security will also be required for these loans.

Norges Bank's liquidity management in the spring of 1999

In recent years Norges Bank has emphasised that liquidity supply in the banking system is to be relatively stable and that the banks as a whole are to have sight deposits with the central bank. This principle will continue to apply. Chart 1 shows that the overall supply of liquidity has been relatively stable. Sight deposits have amounted to around NOK 7bn on average so far this year. In April and May the amount was slightly higher. There are thus no grounds for asserting, as some people have, that Norges Bank tightened liquidity during the spring. However, certain situations may arise where some banks may experience tight liquidity, for example when liquidity is unevenly distributed and the redistribution of liquidity among banks does not function satisfactorily.

Norges Bank wishes to have security for the loans it grants. Since 20 November 1998 the practice for F-loans has been to increase the most recent repo rate by means of an add-on. If banks continue to procure liquidity through unsecured F-loans they will incur higher borrowing costs than if they had opted for secured transactions. Norges Bank increased the add-on in December 1998 and in April this year in order to boost demand for secured credit.

In many other countries the central bank sets the interest rate on liquidity supplied through market operations and thereby signals the market rate it deems appropriate. Norges Bank has decided not to signal interest rates in this way. Norges Bank conducts monetary policy by setting the interest rates on banks' deposits and overnight loans in the central bank, not by changing the price of the liquidity supplied through market operations. For Norges Bank, the increase in the add-on for F-loans in April was purely a technical move aimed at increasing the volume of secured loans in relation to unsecured F-loans.

The relationship between Norges Bank's key rates and interest rates on instruments with longer maturities

The interest rate on deposits in the money market with a maturity exceeding one day is influenced by expectations of future movements in Norges Bank's key rates. The interest rate on deposits reaching maturity in one week reflects an average of the expected interest rates on one-day deposits during the week to maturity. Similarly, three-month deposit rates reflect both actual and expected future daily rates. If market participants expect Norges Bank to lower its key rates in the coming weeks, three-month rates will be lower than interest rates on krone deposits with shorter maturities. Norges Bank's setting of interest rates will therefore influence money market rates through actual interest rates and through market expectations concerning future interest rate levels.

Chart 2 shows movements in Norges Bank's key rates and one-week and three-month money market rates. So far in 1999, Norges Bank has lowered its key rates in four steps by half a percentage point on each occasion. The deposit rate is currently 6 per cent and the overnight lending rate is 8 per cent. The chart shows that short-term money market rates have fallen by approximately the same margin.

The fall in three-month rates took place primarily in the first quarter. In the second quarter three-month rates showed little change despite the reductions in Norges Bank's key rates in both April and June. It may be that these reductions in key rates were expected and that they were already reflected in longer money market rates. Moreover, expectations of future key rate reductions subsided at the beginning of the summer. In the third quarter, money market rates edged down again, even though Norges Bank kept its key rates unchanged. This may have reflected expectations of a further reduction in key rates.

FRAs are contracts between two parties on an interest rate to be paid at a specified time in the future. These forward rates will reflect market expectations concerning interest rate movements. For example, the interest rate offered today in a three-month FRA maturing in September indicates the three-month rate expected by market participants in September. When interest rate expectations change, the interest rates offered in the FRA market also change. The thick curve in Chart 3 shows movements in three-month rates for loans starting on 15 September, based on the prices quoted in the FRA market from March to June this year. In the first half of April this rate was 5.1 per cent. Two months later it was approximately 0.7 percentage point higher. The chart shows that in June market participants also expected interest rates to fall in the second half of the year, but that the reduction was expected to be substantially smaller than anticipated in April. This change in interest rate expectations probably explains why longer money market rates remained high during the second quarter in spite of the reduction in Norges Bank's key rates. The thin curve in Chart 3 shows the

interest rate on three-month loans starting from 15 December. The curve shows that this rate rose until the beginning of the third quarter and then remained fairly stable until August when it again edged down in the period to the meeting of Norges Bank's Executive Board on 25 August.

Monetary policy influences activity in the Norwegian economy as Norges Bank's key rates - via money market rates - influence banks' interest rates. When Norges Bank increases its key rates, money market rates will usually follow suit. Since bank lending is to a large degree financed in the money market, a rise in key rates will increase banks' borrowing costs. This will usually lead to an upward adjustment of the interest rate on deposits from and lending to households and companies.

In August of last year Norges Bank raised its key rates on three occasions by a total of 3 percentage points. The banks followed suit fairly quickly, raising their lending rates by a corresponding margin. So far in 1999 Norges Bank has lowered its key rates by a total of two percentage points, one percentage point in the first quarter and one in the second quarter. From the fourth quarter of last year to the first quarter of this year, banks' lending rates have fallen slightly more than the three-month rate in the money market and considerably more than Norges Bank's key rates. This was probably due to competition between banks combined with strong expectations of a further reduction in the key rates. The change in expectations in the second quarter (see Chart 3), which contributed to keeping money market rates virtually unchanged, may have led to a smaller reduction in banks' lending rates than in Norges Bank's key rates. However, statistics relating to this are still unavailable.

Long-term rates and the credibility of monetary policy

If there is confidence in monetary policy, changes in Norges Bank's key rates will have only a limited effect on long-term rates. Long-term rates will primarily be determined by the long-term required real rate of return on capital, which is determined in an international capital market. If confidence in economic policy deteriorates because, for example, Norges Bank sets key rates at such a low level that this generates expectations of higher inflation and a volatile krone exchange rate, long-term rates will increase. In order to invest in the Norwegian bond market, an add-on to the interest rate corresponding to the sum of expected inflation and increased risk premium will be required. The consequences of low confidence are thus a volatile krone exchange rate, a high risk premium and an unnecessarily high interest rate.

Norges Bank's conduct of monetary policy thus has an impact on the entire interest rate curve. Short-term interest rates reflect expectations of the setting of key rates in the short run, whereas long-term interest rates are more a reflection of international conditions and the degree of confidence in monetary policy.