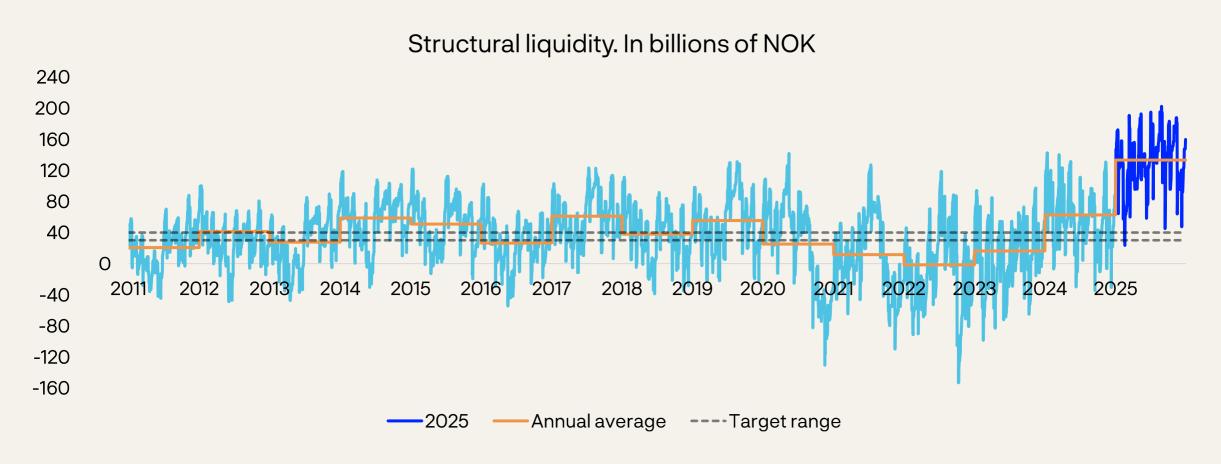


Higher structural liquidity

Consequences for Norges Bank's liquidity management

Structural liquidity is at a historically high level

Structural liquidity is defined as banks' deposits in Norges Bank, i.e. central bank reserves, prior to Norges Bank's market operations



Agenda

- Key reasons for high structural liquidity in 2025
- Norges Bank's liquidity management system and liquidity policy objectives
- Norges Bank's experiences from withdrawing surplus liquidity
- Consequences for NOWA volume and other effects of high structural liquidity
- What can be done if Norges Bank fails to achieve its liquidity policy objectives?

Reasons for high structural liquidity in 2025

Two key reasons:

1. High starting point

Government borrowing over time has not been high enough to compensate for the borrowing requirement

2. Steady growth through 2025

NOK 82bn will be transferred to the GPFG through daily NOK sales



1. High starting point for structural liquidity in 2025

Over time, the government will borrow an amount equal to the borrowing

requirement*

Borrowing requirement
E.g. lending from state banks and government bonds reaching maturity



Structural liquidity **increases** when state banks lend NOK, e.g. through student loans, and when the banking system receives repayments of NOK lent to the government

Government borrowing



Structural liquidity **decreases** when the government borrows NOK from the banking system

*Borrowing can deviate from the borrowing requirement due to other considerations, such as borrowing volume predictability and wellfunctioning government securities markets

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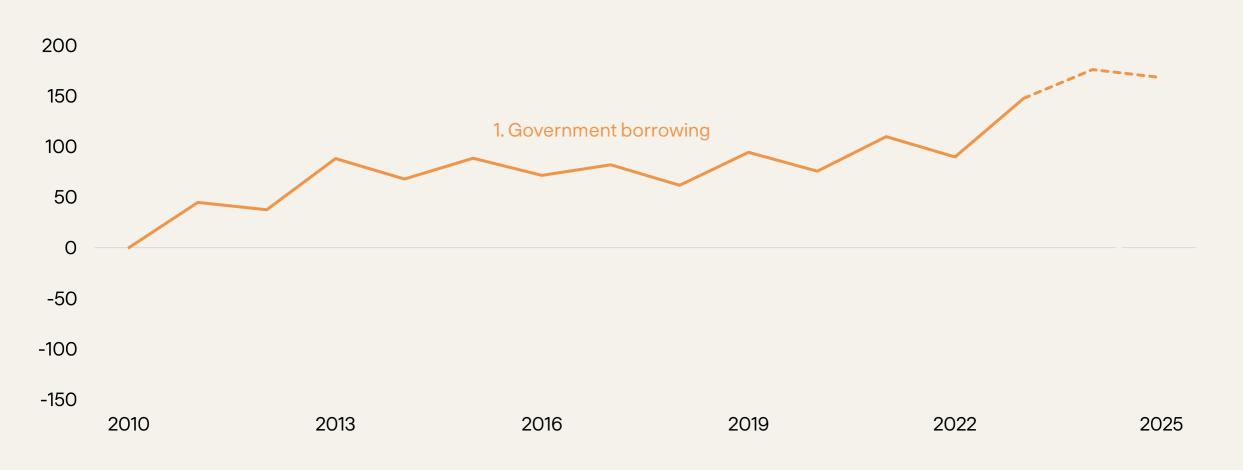
In recent years, government borrowing has been somewhat lower than indicated by the borrowing requirement, increasing structural liquidity

*Borrowing can deviate from the borrowing requirement due to other considerations, such as borrowing volume predictability and wellfunctioning government securities markets

Sources: The central government accounts and Norges Bank

Liquidity effect of government borrowing

Cumulative change. 2010=0. In billions of NOK



The decomposition of 2024 and 2025 is based on estimates. The actual figures will be published in the central government accounts

2. Steady growth in structural liquidity through 2025

The petroleum fund mechanism should be liquidity-neutral over time

Structural liquidity increases when Norges Bank sells NOK to the banking system and receives foreign currency (which is transferred to the GPFG)

Structural liquidity increases when government expenditure, eg pensions, are paid from the government to the banking system and increases liquidity

The government's

The government's petroleum revenues (oil tax and dividends)

Structural liquidity **decreases** when oil tax and dividends are paid *from the banking system* to the government

2. Steady growth in structural liquidity through 2025

The petroleum fund mechanism should be liquidity-neutral over time

Sale of NOK

Non-oil budget deficit

The government's petroleum revenues (oil tax and dividends)

The actual non-oil budget deficit has been lower than budgeted for several years

-> This has resulted in too much liquidity accumulating in the government's account, which should have been transferred to the GPFG

2. Steady growth in structural liquidity through 2025

The petroleum fund mechanism should be liquidity-neutral over time



The government's petroleum revenues (oil tax and dividends)

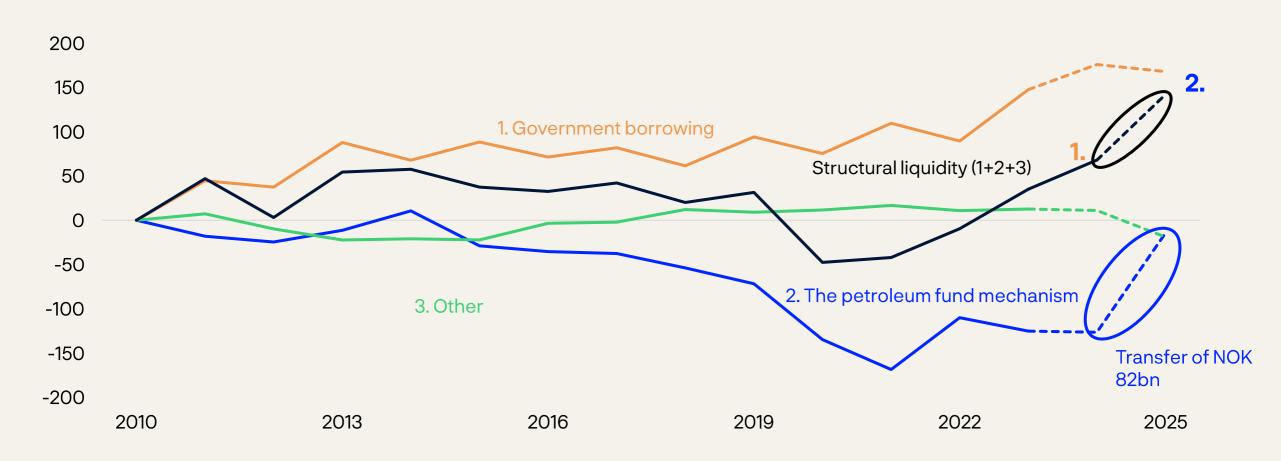
NOK 82bn too little has been sold to fund transfers to the GPFG

The amount will be transferred to the GPFG in 2025. Liquidity will be increased correspondingly through NOK sales

Sources: The central government accounts and Norges Bank

Overall higher structural liquidity in 2025

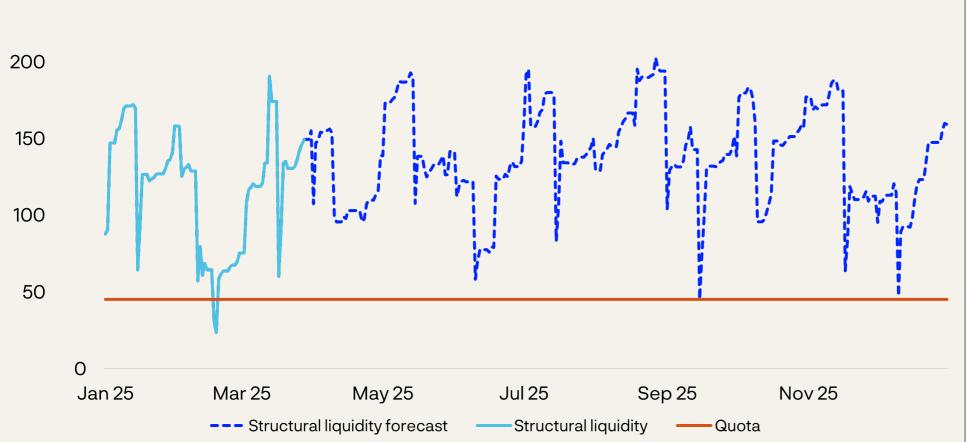
Cumulative change. 2010=0. In billions of NOK



The decomposition of 2024 and 2025 is based on estimates. The actual figures will be published in the central government accounts

Liquidity in 2025 and Norges Bank's liquidity management

Structural liquidity. In billions of NOK



Total quota of NOK 45bn

Banks' deposits within their respective quotas are remunerated at the policy rate

The reserve rate

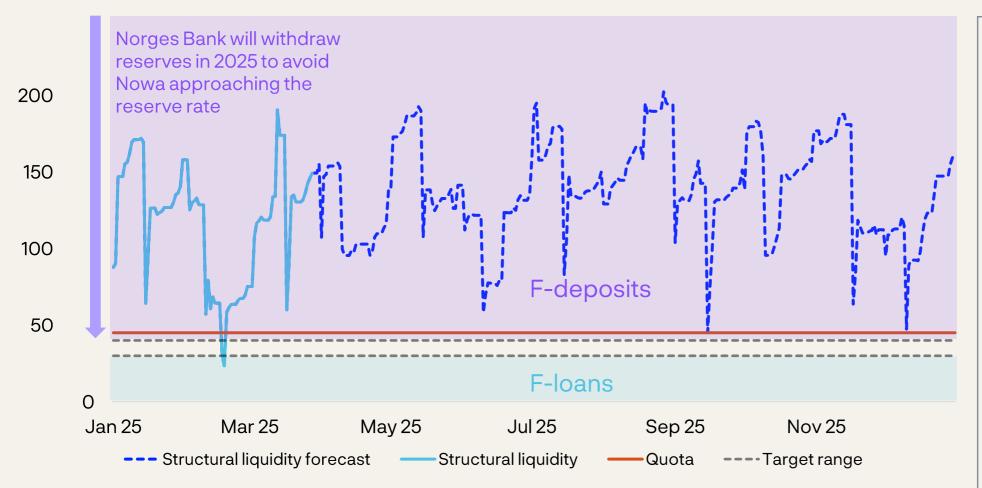
Reserves in excess of the quota are remunerated at 1 percentage point lower than the policy rate

Overnight lending rate

The interest rate for deposits is 1 percentage point higher than the the policy rate

Liquidity in 2025 and Norges Bank's liquidity management

Structural liquidity. In billions of NOK



Market operations

Norges Bank aims to maintain reserves between NOK 30bn and NOK 40bn through market operations

F-deposits

Withdraws liquidity if SL is above NOK 40bn at a rate equal to or *lower* than the policy rate

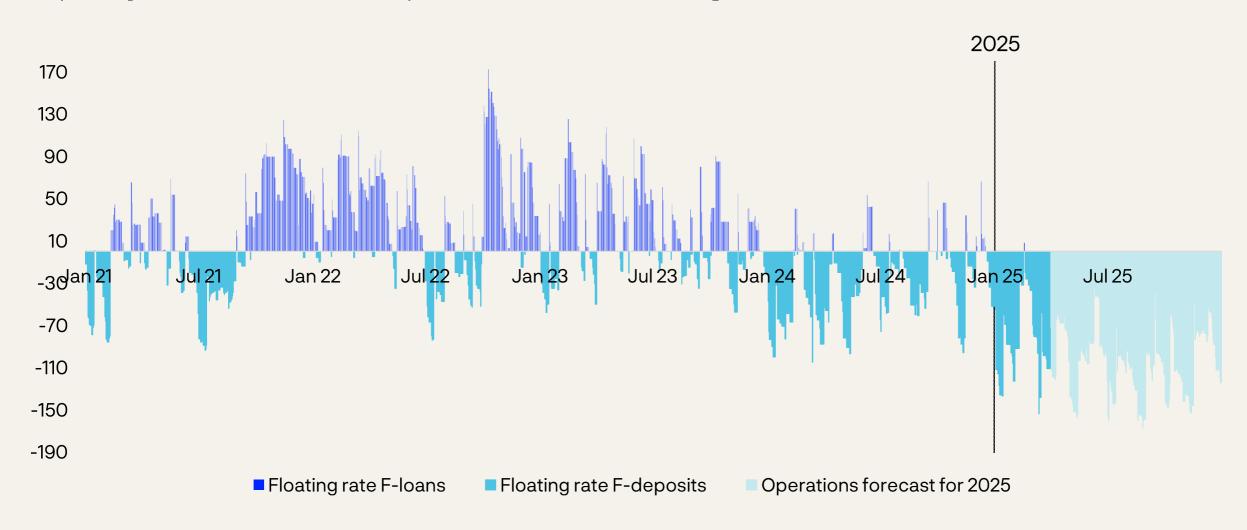
F-loans

Supplies liquidity if SL is below NOK 30bn at a rate equal to or higher than the policy rate

Source: Norges Bank

Necessary to withdraw substantial liquidity in 2025

Liquidity effect of market operations outstanding. In billions of NOK



Overall liquidity policy objectives

1

Ensure that short-term money market rates are close to the policy rate

2

Facilitate an efficient payment system

3

Offer liquidity insurance and be lender of last resort

4

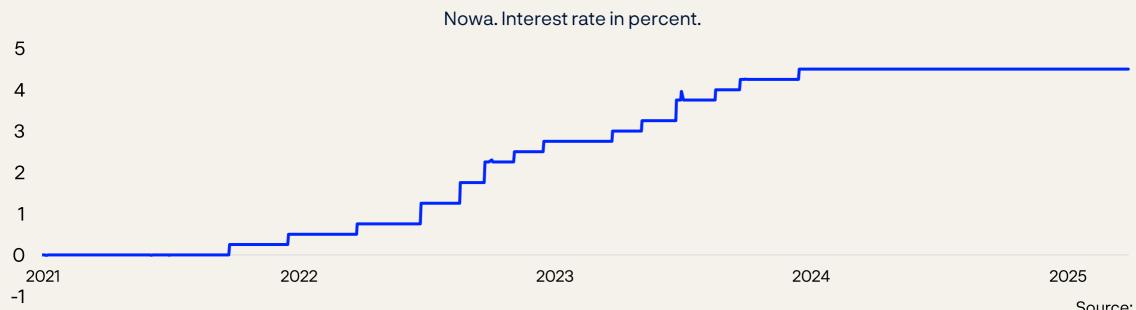
Make it possible for liquidity and credit risk to be borne to the greatest extent possible by private financial system participants

The pass-through is first evident in the overnight market in which banks redistribute central bank reserves (Nowa)

Banks should be incentivised to actively manage liquidity risk

Pass-through to Nowa – interest rate close to the policy rate

- Nowa is the interest rate in NOK on unsecured overnight interbank loans
- Keeping Nowa close to the policy rate through Norges Bank's liquidity management is still possible



Lessons learned from withdrawing surplus liquidity using F-deposits in 2025

Central bank reserves after F-deposits. In billions

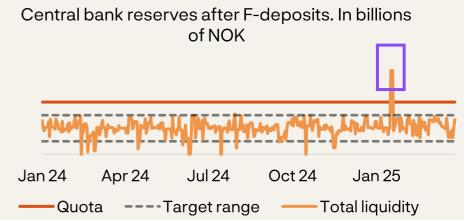
55 45

35

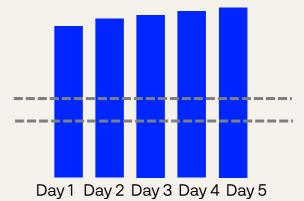
Maturities from one to 13 days

Majority of maturities were four days or less

- Have operated mostly within the target range, but maturities of more than a few days pose a challenge
- Too few bids for one 13-day F-deposit leading to NOK 13bn being deposited at the reserve rate
- Banks often bid to stay just within quota on day 1
 - Increasing structural liquidity often necessitates a new deposit to be auctioned as early as the following day
- This results in a very large number of days with F-deposit auctions



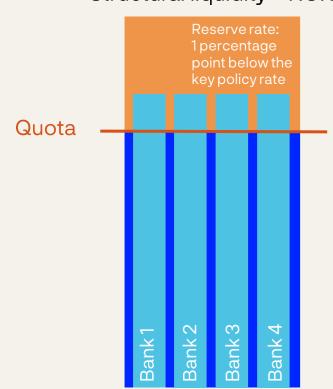
Eg increasing structural liquidity where Norges Bank withdraws liquidity using an F-deposit with a maturity of 5 days



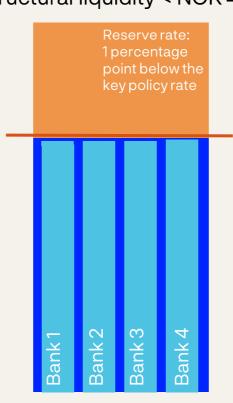
F-deposit auctions lead to lower liquidity redistribution

Central bank reserves on a given day in two different scenarios

F-deposits auctionedStructural liquidity > NOK 40bn

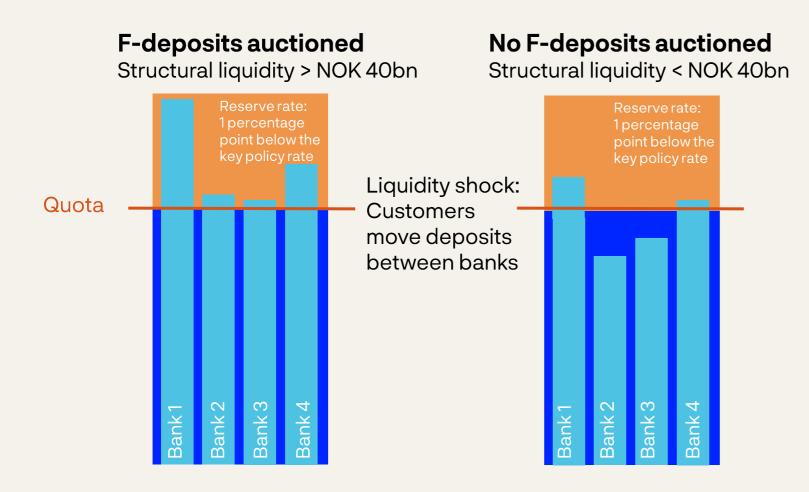


No F-deposits auctioned Structural liquidity < NOK 40bn



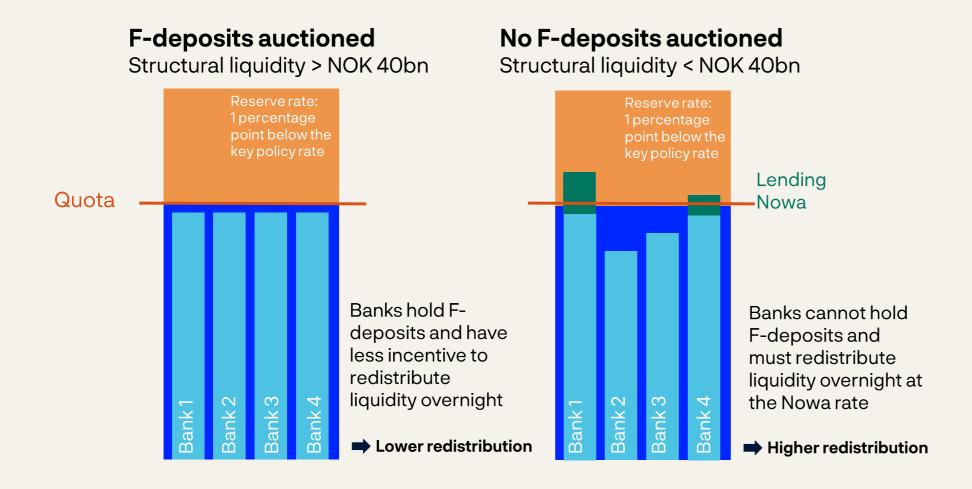
F-deposit auctions lead to lower liquidity redistribution

Central bank reserves on a given day in two different scenarios



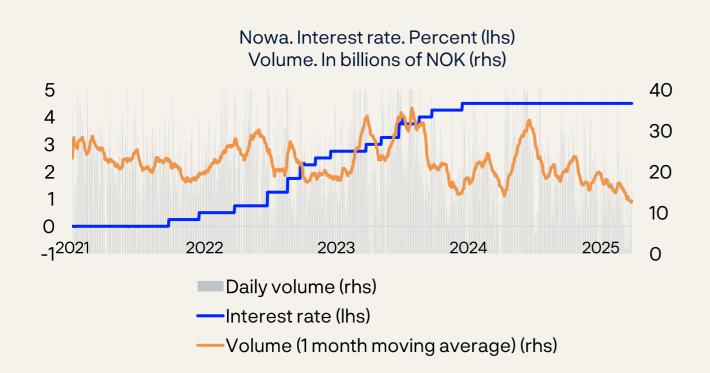
F-deposit auctions lead to lower liquidity redistribution

Central bank reserves on a given day in two different scenarios



Pass-through to Nowa - somewhat lower volume

- Overnight liquidity redistribution is often lower on days in which F-deposits are auctioned
 - Daily Nowa volume average in 2025 pulled slightly down
- Risk that banks' ability to redistribute and handle liquidity shocks will be weakened over time



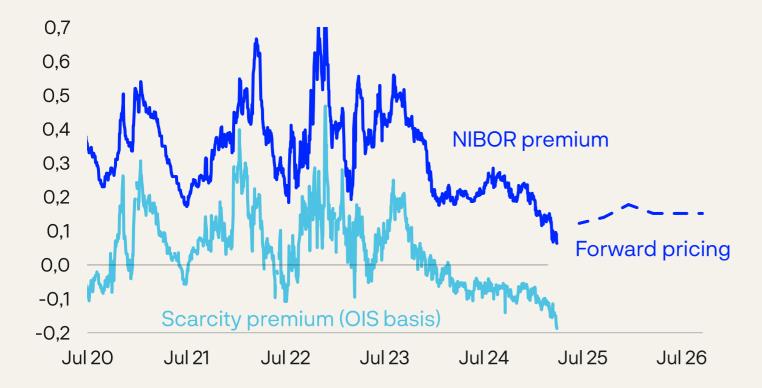
Date	Nowa	Volum (mill NOK)	Qualifier	Banks lending	Banks borrowing	Transactions
2025- 03-20	4.50	15975	Normal	10	6	11
2025- 03-19	4.50	1985	Normal	4	6	7
2025- 03-18	4.50	1980	Normal	3	5	5
2025- 03-17	4.50	22915	Normal	7	8	19
2025- 03-14	4.50	1610	Normal	3	3	4
2025- 03-13	4.50	1330	Alternative method	2	4	4
2025- 03-12	4.50	20790	Normal	7	6	13
2025- 03-11	4.50	3230	Alternative method	4	2	5
2025- 03-10	4.50	1200	Normal	4	5	5
2025- 03-07	4.50	7680	Normal	6	8	13

Source: Norges Bank

High structural liquidity has pulled down money market premiums

3-month OIS basis and 3-month NIBOR premium. Percentage points

- In addition to falling premiums, the money market curve has flattened out
 - Cheaper for banks to obtain NOK at the expense of the banks' counterparties
 - Banks have less incentive to manage their liquidity beyond a few days



What can be done if Norges Bank fails to achieve its liquidity policy objectives?

Minor adjustments to current quota system

• The time of auction, bid rate, target range, and/or the total quota can be changed

Reserve requirements

- The central bank requires banks to hold a certain amount of reserves
- The amount of sight deposits can be reduced in order to further incentivise banks to manage their own liquidity

Central bank certificates and/or FX swaps

- Reserves can be withdrawn beyond a few days
- Unlike F-deposits, non-banks can also participate in auctions
- This means that banks have to compete more for funding, leading to more market-determined liquidity prices

Summary

- Structural liquidity is at a historically high level
- Norges Bank has withdrawn surplus liquidity through relatively short-term F-deposits
- Norges Bank ensures that NOWA is close to the policy rate, but banks' capacity to redistribute and manage liquidity shocks may weaken over time