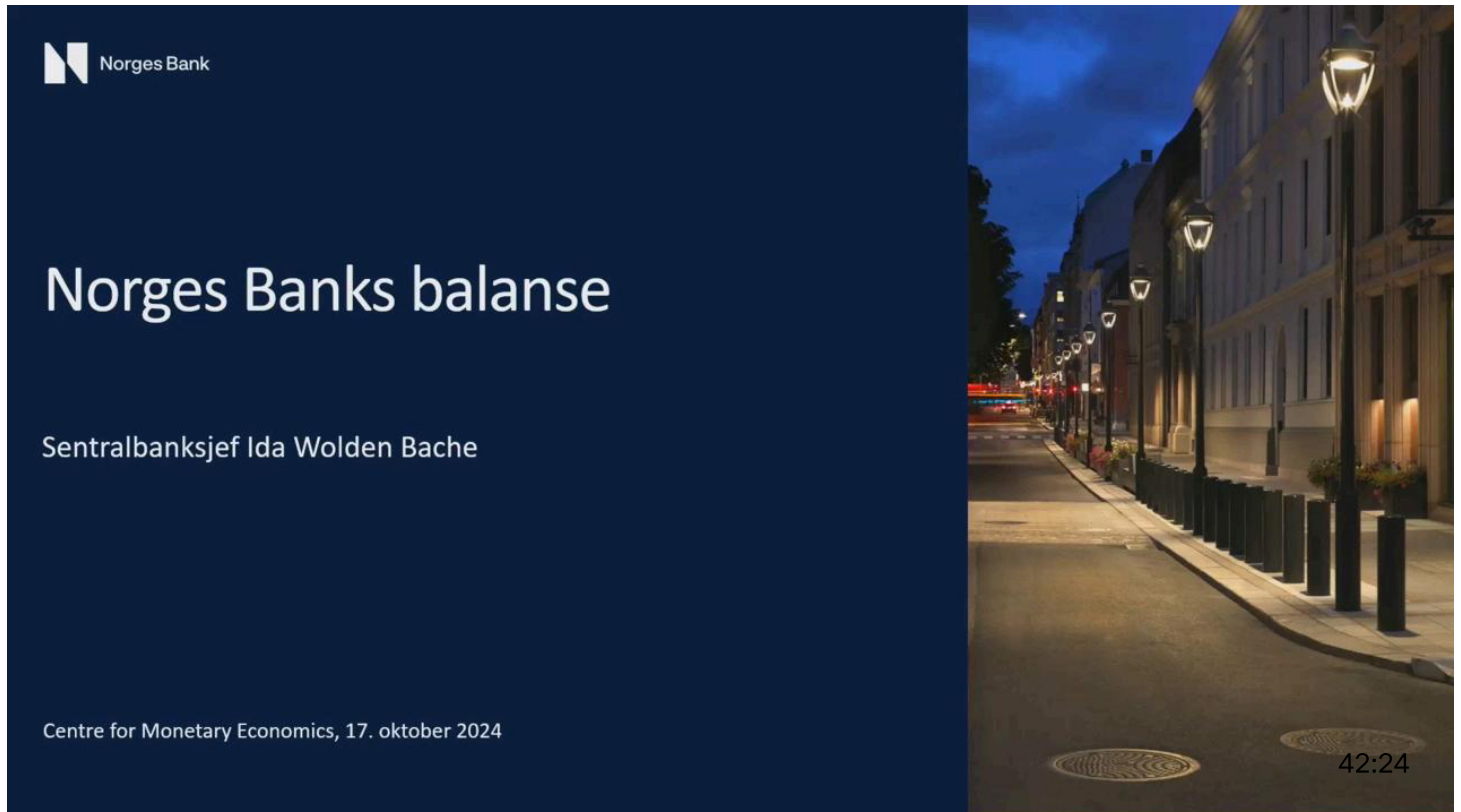


Speech

Norges Bank's balance sheet

Speech by Governor Ida Wolden Bache at the Centre for Monetary Economics (CME) BI Norwegian Business School on 17 October 2024.



Please note that the text below may differ slightly from the actual presentation.

Good afternoon. I would like to thank the Centre for Monetary Economics and BI Norwegian Business School for inviting me here today.

Most of my speeches over the past couple of years have focused on inflation and monetary policy. This has been natural considering that we have been through a period with the highest inflation in more than four decades and the steepest rise in interest rates since the end of the 1990s. Inflation has now slowed considerably since the peak but is still higher than our target. The policy rate has been 4.5 percent

since December 2023. Based on Norges Bank's assessment of the outlook at the time of the September monetary policy meeting, the policy rate needs to be kept at today's level for a period ahead. At the same time, the time to ease monetary policy is approaching.

This is a topic I will return to on many future occasions, but not today. Today, I will focus on another topic, namely Norges Bank's balance sheet. Although this might sound like a narrow topic, I hope to convince you that it is both fundamental and relevant. It is fundamental because the conduct of monetary policy is dependent on our being the bankers' bank and the only provider of banks' means of settlement. It is relevant because changes are now taking place that will influence what Norges Bank's balance sheet will look like ahead.

[Chart 1: Central bank balance sheets have changed]

If we look beyond Norway's borders, central bank balance sheets have expanded considerably over the past 15 years. This is primarily due to the lending programmes and the substantial asset purchases implemented by many central banks in the period after the global financial crisis and after the outbreak of the pandemic. The aim has been to promote financial stability and ensure well-functioning markets and to provide further stimulus to the economy in a situation where policy rates were already close to zero.

That stimulus is no longer necessary. In response to rising inflation in the wake of the pandemic and Russia's invasion of Ukraine, central banks in many countries raised policy rates rapidly and substantially. At the same time, many central banks also started to reduce their balance sheets, primarily by refraining from reinvesting maturing securities. A number of central banks are now asking themselves how large their balance sheets should be in normal times. Ultimately, this is about how large a footprint central banks should have in the financial system.

Norges Bank's balance sheet also grew in 2020, largely reflecting our lending to banks after the outbreak of the pandemic. Unlike other central banks, Norges Bank has not considered it necessary or appropriate to purchase assets to stimulate the

economy.

[Chart 2: Norges Bank's balance sheet (stylised version)]

Here you see a stylised version of Norges Bank's balance sheet

On the asset side of the balance sheet, there is not a single Norwegian security, but large holdings of foreign securities. Norges Bank owns FX reserves of around NOK 730 billion, which are the Bank's contingency reserves in international currencies that can be used to promote financial stability or to achieve our monetary policy objectives.

The balance sheet also shows how the FX reserves are funded. Let me first talk about the item on the liabilities side called central bank reserves, this blue bar. Central bank reserves are banks' sight deposits in Norges Bank.^[1] They are a form of money that only we can create and are created if we provide loans to banks or buy securities in the market.

Central bank reserves play a key role in enabling us to carry out our central bank mandate.

However, even though they are important, we have a small amount of central bank reserves on the balance sheet. In normal times, the aim is to have between NOK 30 and 40 billion. Notes and coins are also a small item on the balance sheet. The rest of the funding consists of capital and deposits from the government, which has its current account at Norges Bank. Money on this account is the government's liquid funds, which they use to make payments.

Earlier this year, the government decided to make some changes to its liquidity management. In brief, these changes entail that the balance on the government's account will not continue to increase as it has done so far. This will force us to make some decisions.

Against this backdrop, there are two aspects in particular I would like to discuss here today. One is why it is beneficial that banks hold a small amount of central bank reserves in normal times, which is what our system aims for. The other is what adjustments we have to make on our balance sheet when the government changes its liquidity management.

But before I examine this in further detail, let me expand briefly on why central bank reserves are so important.

[Chart 3: Central bank reserves are important for:]

The fundamental function of central bank reserves is that they are used as a means of interbank settlement. When customers move deposits from one bank to another, banks transfer central bank reserves between each other in Norges Bank. On average, daily interbank turnover at Norges Bank accounts for more than NOK 350 billion.

The role central bank reserves play in the payment system is also why Norges Bank can affect the economy through monetary policy. The most important monetary policy instrument is the policy rate. The policy rate is the interest rate that banks receive on the central bank reserves in their accounts at Norges Bank. The fact that banks need central bank reserves to make payments is precisely why the policy rate can influence interest rate levels in the economy.

Norges Bank's ability to create central bank reserves is also crucial for its ability to safeguard financial stability. Banks are exposed to liquidity risk. The loans they issue usually have long maturities, while their deposits – which account for most of their funding – can disappear to other banks at any time. Even though deposits are considered stable funding for banks, if confidence is lost, they can move quickly.^[2] This applies in particular to deposits that are not covered by a deposit guarantee scheme. This risk became evident during the US banking turmoil a year and a half ago. In the course of a single day, Silicon Valley Bank lost 25 percent of its deposits.

^[3]

Unlike commercial banks, central banks are not exposed to such liquidity risk. Central bank reserves can move between banks, but they can only be in Norges Bank.[4] We can, at any time, create more reserves by providing secured loans to banks or purchasing financial assets against payment in central bank reserves.

[Chart 4: Supply of central bank reserves during the pandemic]

This allows us to quickly supply liquidity to banks during market turbulence or crises, as we did during the global financial crisis and the pandemic.[5] During just a few weeks in March 2020, we lent close to NOK 200 billion to banks, which contributed to stabilising risk premiums in the money market and maintaining confidence in banks' access to short-term funding.

Thus, central bank reserves play a key role in the payment system, in the conduct of monetary policy and in our ability to safeguard financial stability. Nevertheless, we have chosen to have a small supply of reserves on our balance sheet.

In our opinion, there are good reasons for this.

Let me elaborate.

[Chart 5: Why do we want to have such a small supply of central bank reserves?]

One of the lessons from the global financial crisis is that banks can assume too much liquidity risk. This is partly because individual banks do not necessarily take into account the effect of their behaviour on the rest of the financial system. Expecting public authorities to come to their rescue in a crisis may also lead to banks assuming more risk than otherwise.

Since the financial crisis, the authorities have imposed liquidity requirements on banks as a countermeasure. Broadly speaking, the requirements have been designed in such a way that banks must hold liquid assets that can be sold in the case of a funding shortfall. This will increase banks' resilience during periods of market stress without the need for public authority intervention.

The most liquid assets banks can own are central bank reserves. Banks that have sufficient reserves at the central bank can meet their obligations at any time. Other forms of liquidity, like Treasury bills or other safe assets, must first be sold or used as collateral before banks can obtain central bank reserves. This may be difficult to do at short notice, and particularly during financial crises. It has been pointed out that it may therefore be beneficial for financial stability that banks have a large supply of central bank reserves, even in normal times.^[6]

However, having a large supply of central bank reserves may entail some costs.

A large supply of central bank reserves can weaken banks' incentives to manage liquidity risk.

Central bank reserves also yield lower returns than other assets, and unlike other types of assets, the banking system as a whole cannot dispose itself of them. Banks may therefore wish to benefit from the central bank reserves they have to boost their earnings, for example by increasing lending or shortening the maturities on their funding.^[7]

A consequence of banks having a large supply of central bank reserves is that they may take more risk than otherwise. US research suggests that banks issue more short-term debt in response to a large injection of central bank reserves, and that banks do not necessarily reduce such short-term debt when the supply of central bank reserves decreases.^[8] In our view, it is therefore uncertain whether a large supply of central bank reserves in normal times promotes financial stability.

The supply of central bank reserves may also have implications for Norges Bank's footprint beyond the impact it has on banks. In countries that have had a large injection of reserves, risk premiums in money and capital markets have decreased.^[9] It is not obvious that the central bank should cause this effect in normal times. To ensure an efficient allocation of capital over time, the risk premiums should be decided in the market to the largest extent possible. It is nevertheless important that

we have sufficient central bank reserves to perform interbank settlement and to ensure proper monetary policy transmission to market interest rates^[10] In Norges Bank's experience, this can be achieved with a fairly small supply of central bank reserves.

If we want to keep the supply of central bank reserves small, we must fund our assets by alternative means. As mentioned, the government currently provides most of Norges Bank's funding through deposits and capital.

[Chart 6: Norges Bank's balance sheet, stylised version]

One might wonder whether central banks really need capital. A central bank can always meet its liabilities by creating central bank reserves. In principle, the central bank therefore does not need capital. However, there is risk on Norges Bank's balance sheet.^[11] Most assets are in foreign currency, while funding is in NOK. If the krone appreciates, the value of assets will decline in NOK terms. This will lead to losses for Norges Bank, and if losses are large enough, capital could become negative. Persistently negative capital may weaken our credibility and at worst compromise Norges Bank's independence.^[12]

The reason why the government holds such large deposits in Norges Bank is rather more complex. The short version is that the amount in the government's account has increased over time as a result of profit transferred from Norges Bank.

[Chart 7 Returns on FX reserves have been high]

Like commercial banks, Norges Bank earns money, as seen in this chart, which shows Norges Bank's cumulative profit since turn of the millennium. Profit stems mostly from the return on FX reserves. FX reserves are invested in equities and bonds denominated in foreign currency, generating income for Norges Bank. Over

time, this income has exceeded the interest we pay on banks' central bank reserves and on the government's account. In recent years, a weaker NOK has also pushed up the value of FX reserves.

Let us examine in more detail what happens to Norges Bank's balance sheet when the value of the FX reserves increases.

[Chart 8 When FX reserves increase, the balance sheet expands]

The increase in FX reserves is illustrated here by the yellow bar rising in this chart. This means that the balance sheet expands. This is matched by an increase in Norges Bank's capital on the liabilities side – see the dark blue bar.

The authorities have decided that Norges Bank's capital must not exceed 40 per cent of the value of the FX reserves.^[13] When capital exceeds this level, the excess is transferred to the government.^[14]

[Chart 9: Transfer to the government's account]

We do this by crediting deposits to the government's account.

Since the government's deposits are a type of debt for Norges Bank, this means that the Bank's capital is reduced, while the government's account increases by a corresponding amount. This is illustrated here by the light blue bar expanding.

Transfers of interest and dividends from Norges Bank is ordinary income that the government can spend over the central government budget.

[Chart 10: When the government spends money, central bank reserves increase]

The government spends this money through the commercial banking system. When paying, for example, pensions, the government first transfers deposits from its account at Norges Bank to banks' accounts at Norges Bank. The banks then credit the bank accounts of pensioners. The effect on Norges Bank's balance sheet is a decrease in the government's account and an increase in the supply of central bank reserves in the banking system. In other words, the deposits Norges Bank credits to the government's account when Norges Bank pays profit to the government become central bank reserves when the government spends them.

Had we stopped there, growth in the FX reserves would have resulted in a persistent rise in the level of central bank reserves. However, the government has so far ensured that this has not occurred.

[Chart 11: The government raises government debt corresponding to the transfer from Norges Bank]

The government has done this by issuing government bonds equal to the transfers from Norges Bank. When the government borrows money, central bank reserves again leave the banking system and enter the government's account. The government has let this money remain in its account at Norges Bank. Over time, growth in FX reserves has therefore resulted in more money in the government's account and not in a larger supply of central bank reserves.

There will be a change from 2025. Earlier this year, the Ministry of Finance decided that the government will no longer issue government debt corresponding to the transfer of interest and dividends from Norges Bank.^[15] In the period ahead, the government's account will therefore no longer grow in pace with the FX reserves. Further growth in the FX reserves, either as a result of returns or changes in the krone exchange rate, will therefore be reflected in other items on Norges Bank's balance sheet than in deposits from the government.^[16]

[Chart 12: What will the balance sheet look like ahead?]

This means that we must decide what we want the balance sheet to look like ahead. Under the current framework, we primarily have two alternatives:

One alternative is to let further growth in FX reserves appear somewhere else on the liabilities side of our balance sheet. This will happen if we continue to fund the transfers to the government by creating new deposits in the government's account that will become central bank reserves.

The other alternative is to adjust the asset side of the balance sheet by selling foreign currency and buying NOK which we then give to the government.

Let me say a little more about these two alternatives.

If we continue to create new deposits to fund dividends to the government, this will lead to central bank reserves growing over time. The practice within our current system means that Norges Bank withdraws central bank reserves in excess of our target, which is between NOK 30 and 40 billion, by offering banks time deposits.^[17] These normally have a maturity ranging from a few days to a couple of weeks. Central bank reserves placed in time deposits are not available for payments, but because the time deposits have short maturities, banks' liquidity is not reduced to any great extent. The shorter the maturity of a time deposit, the faster banks will have access to the central bank reserves they have tied up. To tie up central bank reserves using short-term time deposits therefore does not significantly offset the costs of central bank reserve growth, as mentioned earlier.^[18] This may suggest that we need to assess other ways of withdrawing the increased liquidity.

The alternative is to adapt the asset side of the balance sheet by selling foreign currency and buying NOK in the market that we then give to the government. This creates no new central bank reserves but since this involves selling the return from FX reserves as we receive it, FX reserves would cease to grow as they have to date.

In other words, we face important choices ahead.

Which alternatives we choose will be announced at a later stage. We have not decided whether we want continued growth in FX reserves and, if so, how this should be funded. Several considerations must be taken into account in this assessment. FX reserves are an important part of Norges Bank's contingency arrangements. To ensure that we have adequate leeway to fulfil our monetary policy mandate and to promote financial stability, we must ensure that FX reserves are sufficient. We must also manage the supply of central bank reserves to ensure monetary policy transmission to the economy and safeguard an efficient payment system. At the same time our aim is to preserve banks' incentives to manage their risk and avoid undue influence on risk premiums in money and capital markets. This assessment, like all our other assessments, will be guided by Norges Bank's mission.

Thank you for your attention!

Footnotes

[1] Banks can also have deposits in Norges Bank that are not central bank reserves, in that they are not available to banks on demand and thus cannot be used for payments to other banks. They may be deposits that are tied up for a certain period by agreement between a bank and Norges Bank. As part of Norges Bank's liquidity management, what we call F-deposits are used for a period to reduce the amount of central bank reserves in the banking system.

[2] Stable deposits are considered stable funding under the Liquidity Coverage Ratio (LCR). The treatment of non-stable deposits depends, among other things, on the type of depositor.

[3] Board of Governors of the Federal Reserve System: *Material Loss Review of Silicon Valley Bank, Evaluation Report 2023-SR-B-013 September 25, 2023*

[4] The public can withdraw cash, which will reduce the supply of central bank reserves. However, the central bank retains its funding since cash is also a claim on Norges Bank.

[5] The chart includes both central bank reserves and F-deposits with one-day maturity. As long as Norges Bank had outstanding extraordinary F-loans issued in connection with the pandemic, all liquidity in excess of the Bank's target of NOK 35 billion was absorbed using F-deposits with a maturity of one day. F-deposits with a maturity of one day are in practice the same as central bank reserves, but withdrawing liquidity through F-deposits was necessary to maintain the quota system for the conduct of monetary policy.

[6] See eg Andrew Bailey (2024): [The importance of central bank reserves](#), and Lorie K. Logan (2023): [Ample reserves and the Friedman rule](#).

[7] These effects are likely dependent on the way that central bank reserves are supplied to the banking system. Supply through loans allows banks to choose the volume of central bank reserves they hold, while supply through the purchasing of financial assets provides a volume undecided by the banks. See Isabel Schnabel (2024): [The Eurosystem's operational framework](#) for a discussion on the differences between a supply-driven versus a demand-driven provision of central bank reserves.

[8] See Acharya, V.V., Chauhan, R.S., Rajan, R. and Steffen, S. (2023), "[Liquidity Dependence and the Waxing and Waning of Central Bank Balance Sheets](#)", *NBER Working Papers*, No 31050, National Bureau of Economic Research; Acharya, V. and Rajan, R. (2022), "[Liquidity, liquidity everywhere, not a drop to use – Why flooding banks with central bank reserves may not expand liquidity](#)", *NBER Working Papers*, No 29680, National Bureau of Economic Research.

[9] In the euro area, premiums in the short-term money market fell significantly following the introduction of QE, see eg [Euro money market study 2018](#). US money market premiums fell less during the introduction of QE, mostly because several of the most active banks in the US money market are foreign banks that are less exposed to the effects of QE than US banks.

[10] Claudio Borio (BIS) argues that central banks' balance sheets should be as small as possible and as riskless as possible in a way that is compatible with the central bank fulfilling its mandate effectively. (See Claudio Borio: [BIS Working Papers No 1100 Getting up from the floor](#).)

[11] In addition to risk on the asset side of our balance sheet, the need for capital may be influenced by the size of other types of interest-free funding on the central bank balance sheet. When the public has a small volume of cash, the central bank may need more capital to ensure positive results over time.

[12] Section 3-11 (1) of the Central Bank Act states that Norges Bank shall have sufficient capital to fulfil the Bank's purpose. See also the discussion concerning the central bank's need for capital in [Prop. 97 L \(2018-2019\) Act relating to Norges Bank and the Monetary System, etc. \(Central Bank Act\)](#) (in Norwegian only).

[13] [Retningslinjer for avsetning og disponering av Norges Banks overskudd \[Guidelines on the reserves and allocation of Norges Bank's profit\] - Lovdata](#) (in Norwegian only)

[14] Norges Bank's capital comprises the Adjustment Fund and the Transfer Fund. Norges Bank's profit is credited to the Adjustment Fund. If the Fund exceeds 40 per cent of the value of the FX reserves, the excess amount is transferred to the Transfer Fund. From the Transfer Fund, a third of the balance is transferred to the government's account each year.

[15] See [letter from the Ministry of Finance to Norges Bank of 3 April 2024](#). The decision is based on recommendations from a working group [report](#) on the government's liquidity management, finalised in April 2024.

[16] Under the current transfer framework, larger FX reserves will result in a combination of increased capital (40 percent) and increased central bank reserves (60 percent).

[17] In Norges Bank's liquidity management system, time deposits are called F-deposits.

[18] Norges Bank can time deposits considerably longer maturities than they have today, although it will result in higher interest expenses for Norges Bank and be difficult to reconcile with the current system for implementing monetary policy. We can also withdraw central bank reserves in other ways. We can issue securities, either in NOK or foreign currency, or we can impose reserve requirements on banks. These are tools we do not use today, and which can add complexity to our operational framework. If they are to be used, they require further study.