SPEECH

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SPEAKER:	Erik Thedéen
VENUE:	Sveriges Riksbank
TIME:	13.00

The banks need to have more active liquidity management

Welcome to the Riksbank!

Today I am going to talk about the challenges faced by the Riksbank and other central banks in designing their operational frameworks when normalising their balance sheets (see Figure 1) and how this affects the Swedish banks. For several years, the amount of central bank liquidity in several countries has been at or near record levels, due to monetary policy-driven asset purchases. But that is now changing.[1]

My message here today is that our monetary policy counterparties, the banks, need to prepare for the fact that there will soon be substantially less central bank liquidity in the Swedish banking system. They need to adapt to managing their liquidity in the market. This makes greater demands of the individual bank to have both operational capacity and a willingness to lend and borrow on the overnight market. At the same time, the banks should always be able to use the Riksbank's lending facilities without hesitation when needed. They not only can, but should, use them when the money market is for some reason struggling to reach equilibrium and overnight rates are moving erratically. The Riksbank's lending facilities are there to be used and are the basis for stable interest rate formation.

The banks' liquidity management is important for the entire financial system and for the Riksbank, as it is important for the Riksbank's operational framework, and also for Swedish financial stability.

[1] The theme of this speech is also discussed in the article "Banks need more active liquidity management" in Financial Stability Report 2025:1, Sveriges Riksbank (2025).

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Central bank liquidity will decrease

Central bank liquidity refers to the banking system's total claims on the central bank in domestic currency. It is created solely by the central bank, either through asset purchases or through collateralised lending and repos. The banks can place central bank liquidity as overnight deposits with the central bank – so-called central bank reserves. These reserves are the most liquid and secure financial assets that serves as means of payment between banks. Or they can invest it in longer-term market operations, such as certificates issued by the central bank. In Sweden, the Riksbank issues certificates in which the banks can invest central bank liquidity. The Swedish banks have in recent years had large holdings of both reserves and certificates (see Figure 2). In several other countries, banks can only place central bank liquidity with the central bank as overnight deposits – central bank reserves.

When we have had these unusually high levels of central bank liquidity, banks have held considerably more reserves than they actually need to make their payments. We are now in a situation where we and several other central banks are reducing our holdings of securities, known as quantitative tightening (for Sweden, see Figure 3). This reduces central bank liquidity in the banking systems (for Sweden, see Figure 2). If quantitative tightening continues, according to the most recent monetary policy decision, central bank liquidity in the Swedish banking system is estimated to be around SEK 400 billion in 2030. However, the Riksbank has not determined this amount on the basis of considerations relating to the operational framework, it is primarily a result of the policy decision to finance the foreign exchange reserve in Swedish kronor.

Many central banks currently steer short-term market rates towards the central bank deposit rate, or the floor of the interest rate corridor that typically exists between the rates in the central bank's deposit and lending facilities. Since the abundance of central bank reserves has been created by the central bank supplying liquidity through the purchase of securities, such systems have come to be known as supply-driven abundant reserves systems.

In the past, many central banks, including the Riksbank, relied on banks' demand for central bank reserves and applied traditional interest rate corridor systems to meet this demand. Central banks aimed to steer short-term market interest rates towards the centre of the interest rate corridor, and the amount of central bank reserves was relatively small. Reversely, if there are large amounts of central bank liquidity, central banks with a corridor system can drain liquidity in various ways to reduce the amount of reserves. Such systems have come to be known as "scarce reserves systems" in the international debate (for a stylized classification of central banks' frameworks, see Table 1).

The Riksbank's operational framework currently has a narrow interest rate corridor and is adapted to function with different amounts of central bank liquidity. The banks should primarily be able to obtain the liquidity they need via other banks, for example via overnight loans, or with the help of the Riksbank's standing lending and deposit facilities and open market operations.

However, the Riksbank is also continuously reviewing how the operational framework functions and is currently considering some adjustments to strengthen incentives for the banks to participate in the overnight market, while at the same time not hesitating to borrow from the Riksbank if necessary. There are three changes in particular that we are looking at. One potential change is to widen the interest rate corridor, i.e. the difference in interest rates between the deposit and lending facilities. Another possible change is to lower the interest rate premium for the supplementary liquidity facility. A third is mandatory test transactions, where our counterparties pledge collateral to borrow from the Riksbank. I will tell you more about these potential measures later in this speech.

The banks' liquidity management is affected by the Riksbank's operational framework

The Riksbank's operational framework is an interest rate corridor system with standing deposit and lending facilities that are used to steer the short-term market rate towards the policy rate. The facilities allow the banks to invest or borrow unlimited central bank reserves with overnight maturity. Currently, the deposit rate is 10 basis points below the policy rate and the lending rate is 10 basis points above it. It is this range of 20 basis points that forms the interest rate corridor. There is also a supplementary liquidity facility with an interest rate of 75 basis points above the policy rate. An important feature of the Riksbank's operational framework is that it is integrated with the payment system and that the use of the standing facilities is automated. This means that unsettled intraday credits and deficits in the payment system at the end of the day are automatically converted into overnight loans in the Riksbank's standing lending facilities, as long as the banks have sufficient eligible securities to pledge as collateral. But also that the banks have access to central bank reserves when the instant payment system is open 24 hours a day, 7 days a week, all year round.[2]

The banks should be comfortable and confident in using our facilities to access central bank reserves quickly and efficiently when needed. This applies both to

[2] The monetary policy night can be said to be one hour long, as transfers of reserves via intraday credit from the large-value payment system (RIX-RTGS) to the instant payment system (RIX-INST) are closed between 18.00 and 19.00.

access to intraday credit, whenever the payment system is open, and to overnight loans to cover any deficit at the end of the day. But there also needs to be a balance of liquidity between the banks, as liquidity is not evenly distributed; some banks may have surpluses while others have deficits. Therefore, the existence of a functioning overnight market is crucial. The overnight market refers to the market in which banks balance liquidity with each other before the end of the day, until the next day. In a corridor system like the Riksbank's, the idea is that banks borrow reserves from each other on the overnight market so that they are redistributed from banks with surpluses to banks with deficits. As a result, the banking system as a whole should not need a large amount of central bank liquidity.

The Riksbank conducts weekly market operations with the aim of providing or withdrawing liquidity from the banking system. Its purpose is to balance the liquidity position of the banking system so that the central bank reserves are close to zero during the maturity of the certificate or repo, thus better balancing the borrowing and lending needs of different banks in the overnight market. The pricing in the open market operation also provides guidance on the level of interest rates that should be the starting point for interest rate setting in the market for short-term maturities in Swedish kronor.

If one or more banks have a liquidity deficit, there is always one or more banks that have an equally large surplus. The approach is based on the understanding that the reserve holdings of different banks can vary from day to day, so that an individual bank's surplus of reserves today may be a deficit tomorrow. There is therefore a long-term economic interest for banks to balance one another's reserve positions over time by trading on the overnight market. For this to happen in practice, banks need to trust one another and establish business relationships among themselves.

The interest rate corridor is intended to create incentives for the banks to even out surpluses or deficits among themselves as far as possible on the overnight market, as they can offer each other more attractive interest rates than if banks with surpluses invest reserves in the Riksbank and banks with deficits borrow from the Riksbank. If the corridor is wide enough, banks will seek to borrow from one another at an overnight rate close to the centre of the corridor. As the overnight rate acts as an anchor for longer-term interest rates, the level of the policy rate thus propagates through the economy in line with monetary policy intentions. We can conclude that the Riksbank's operational framework has functioned well, with money market rates close to the policy rate (see Figure 4), during periods when the size of our balance sheet has fluctuated considerably.

At present, banks mainly choose to balance liquidity among themselves via unsecured overnight loans. We expect the need for overnight loans to increase as

central bank liquidity continues to decline. Banks may then want some of the overnight loans to be collateralised. Liquidity smoothing can equally well be done through overnight repos or collateralised loans if the banks prefer. Regardless of which markets the banks prefer to use, the Riksbank's policy rate, via the overnight rate, will serve as the anchor for Swedish money market rates. The overnight market must function well enough to prevent and reduce the risk of liquidity disruptions in the banking system, while facilitating the mitigation of such disruptions when they do occur.[3] The Riksbank is prepared to cooperate with market participants to help remove infrastructural barriers (e.g. last time of day for cleared repos) and promote a more liquid repo market and collateralised lending.

Most central banks have steered the overnight rate towards the 'floor'

The main contributors to the large amount of central bank liquidity in the Swedish system are the financing of the foreign exchange reserves with Swedish kronor and the monetary policy securities purchases from 2015 until 2022. When central banks expanded their balance sheets by buying securities, they injected large amounts of central bank liquidity into the banking system as payment for the securities – considerably more than the banks demand.

When this happens, short-term market rates are pushed down towards the central bank deposit rate. To influence the setting of interest rates in the money market, most central banks then chose to stabilise overnight rates in the market with different variants of supply-driven floor systems.

Many central banks that have applied floor systems in an environment of excess central bank reserves see several advantages in doing so, even when central bank reserves are declining as a result of quantitative tightening. One of the benefits is that the banks always have ample access to the safest and most liquid financial asset – central bank reserves – to settle payments and fulfil regulatory requirements for sufficient liquidity and to counter liquidity shocks. At the same

[3] If the central bank only wants to achieve clear signalling of monetary policy, where the focus is solely on steering market rates, it can follow Knut Wicksell's suggestion to lend against good quality collateral at the same rate as it accepts deposits at the central bank. Wicksell argued that the costs and possible losses that the application of an interest rate corridor of 0 basis points could entail for the central bank should be covered by the seigniorage and that the government should cover the central bank's losses, see Wicksell (1919).

The proposal highlights the need for the central bank to consider both monetary policy and stability aspects in the design of the operational framework. An excessively narrow interest rate corridor provides little or no incentive for banks to use market solutions to price and manage risk. The central bank will have a large footprint in financial markets and take over risk that banks should manage themselves. This contributes to distorting the pricing of financial assets and weakening the incentives for banks to limit the risks on their balance sheets.

time, they clearly steer the overnight rate towards the central bank deposit rate, which becomes the most important policy rate.

However, floor systems also have some disadvantages. For example, they provide weak incentives for banks to balance liquidity among themselves in the market. When most banks have a surplus of central bank reserves and can deposit them risk-free at a favourable rate with the central bank, they tend to do so instead of lending to other banks that are currently short of liquidity. This is because the banks with a surplus do not think they earn enough from lending to other banks. One way to put it is that the opportunity cost is simply too low when market rates are close to the central bank's deposit rate. Banks with liquidity shortages can then turn to the central bank to obtain central bank reserves instead. This tends to increase the demand for central bank reserves, which means that the central bank lends additional reserves to banks that could have borrowed the reserves already held by other banks. This increase in central bank reserves, which has been experienced by Norges Bank and others, makes it more difficult to normalise the central bank's balance sheet after quantitative easing. However, central banks can prevent such a development by increasing the opportunity cost of reserves, thereby strengthening banks' incentives to balance liquidity among themselves.[4]

Floor systems also mean that the central bank must somehow ensure that the banking system always has a sufficiently large liquidity surplus towards the central bank, either by purchasing securities or by lending. Otherwise, the central bank will not be able to influence market interest rates as intended by the chosen monetary policy. Both purchases and collateralised lending result in the disappearance of high-quality securities from the market, securities that banks could have acquired themselves to meet liquidity requirements. The liquidity of the markets for these securities may also deteriorate. This risks contributing to the banks relying even more on the central bank instead of acting on the market themselves. If central bank reserves are cheaper and more favourable than raising liquidity in the market, the incentives for banks to limit liquidity risks on their balance sheets on their own are weakened.

[4] Discussed in Bernhardsen and Kloster (2010) and Borio (2023), among others. A quota system means that individual banks may invest a certain proportion, or quota, of their deposits at a favourable rate, usually the central bank's policy rate, and invest the remainder of their deposits in excess of the quota at a less favourable rate. In Norway, the quota is based on the size of the individual bank (balance sheet total) and banks are allowed to place the deposits specified by the quota at Norges Bank's policy rate and the remainder of their deposits at a rate 100 basis points below the policy rate. In Switzerland, The SNB uses a system of tiered remuneration. This encourages liquidity redistribution between sight deposit account holders and thereby promotes an active money market. For sight deposits up to a certain threshold, the SNB policy rate is applied. Sight deposits above this threshold are remunerated at the SNB policy rate minus a discount, see SNB Implementation of Monetary Policy.

Challenges in balancing the amount of central bank reserves

Central banks are now asking themselves how much central bank reserves are needed in the banking systems to fulfil their monetary policy and financial stability tasks effectively and without unintended side effects.

Experience has shown that floors and corridors can both steer money market rates to where the central bank wants them to go. Therefore, the discussion on how central banks should design their policy regimes in this situation has mainly centred on financial stability. As the conditions in the financial system vary from country to country, central bank governance systems will also differ somewhat. This also means that there is not necessarily one single optimal system.

One factor that determines how well a particular policy regime contributes to financial stability is the design and functioning of the money market. As the banking systems and institutional set-up of countries affect the structure of the money market, it is natural that different countries choose different operational frameworks.

Experience with shocks also seems to influence how different central banks view appropriate responses. For example, the banking turmoil that occurred in March 2023, when Silicon Valley Bank and Credit Suisse experienced very severe liquidity problems, showed that the ample amount of central bank reserves already in the banking system was not enough to prevent and avoid liquidity crises.

It highlights some universal factors that are important for the operational framework, such as the fact that banks should not shy away from using the liquidity facilities provided by central banks. The standing facilities should not be associated with any stigma. In addition, the banks must have the operational capacity to provide collateral so that the liquidity facilities can be utilised. I will return to this a little later.

Several central banks stick to the floor system with some adjustments

Several central banks have clearly communicated that they will continue to apply floor systems even when their balance sheets are normalised, but in slightly different ways.

When central banks with floor systems want to reduce their securities holdings, they have to choose how to maintain the banking system's liquidity surplus towards the central bank. Should they supply the banking system with sufficient central bank reserves by buying and holding securities, i.e. a supply-driven floor system, or by meeting the banking system's demand for central bank reserves through lending and repos, i.e. a demand-driven floor system? For example, the Riksbank's operational framework is currently designed to be able to provide the

amount of central bank reserves required by the banks in a flexible manner. However, the Riksbank does not do this by lending within the framework of the operational framework, but by allowing the banks to choose how much of the surplus liquidity is invested in certificates. The rest will remain as reserves.

In a demand-driven floor system, the central bank does not need to hold as many securities as in a supply-driven floor system. On the other hand, the loans and repos that add to the reserves will tie up collateral, which is largely securities.

The Federal Reserve (Fed) and the Bank of Canada (BoC) have communicated that they will maintain the liquidity surplus of the banking system by buying and holding securities, that is, through supply-driven floor systems.[5] At the same time, they emphasise the importance of functional demand-driven facilities, such as standing lending and overnight repo facilities, to avoid disorderly interest rate setting in the markets.

In contrast, the Bank of England (BoE), the ECB and the Reserve Bank of Australia (RBA) have communicated that they are moving to demand-driven floor systems.[6] This means that, in addition to their standing overnight lending facilities, they will also offer the banks the opportunity to borrow as much reserves as they wish at longer maturities.

In this way, the aim is to provide the amount of reserves that banks themselves estimate they need and the amount of reserves needed to stabilise short-term market rates sufficiently close to the central bank's deposit rate.

Stigma and opportunity costs are important factors

Central bank balance sheets should not tie up more resources and risks than necessary, but they should be elastic and able to expand when banks' need for central bank reserves increases in the event of market stress or crisis.

However, there are a few important preconditions for this to work. Both concern what drives banks' behaviour. This includes the opportunity cost of central bank reserves and also a possible stigma.

If the banks are to economize on central bank reserves and not demand more than they need, the interest rate cannot be too favourable when banks place reserves with the central bank. Conversely, it must not be too cheap for banks to

[5] See Williams (2025), Perli (2025) and Logan (2025) for the Fed and Gravelle et al. (2023) for the BoE.

[6] See Bank of England (2024), Benjamen (2025) and Saporta (2025) for the BoE, Schnabel (2024) for the ECB and Kent (2025) for the RBA.

borrow from the central bank. But how high the opportunity cost needs to be for banks to favour market-based liquidity management remains to be seen.

Then there is the issue of stigma. In this context, it can be described as a fear on the part of banks of being 'labelled' – of being perceived as weak if they turn to the central bank to borrow – even though this is economically rational and not an expression of weakness. For demand-driven floor systems to work, banks must be willing to use central bank instruments to obtain liquidity when they need it. If the banks instead try to avoid it, there is a risk that they will not demand enough central bank reserves to keep interest rates close to the deposit rate. Stigma can also be a problem for supply-driven floor systems as individual banks may run out of reserves and need to borrow in stressed situations, as the experience of the liquidity crisis in spring 2023 shows.

The BoE, the ECB and most recently the RBA try to apply a sufficiently high opportunity cost for reserves by ensuring that the interest rate on lending in the weekly open market operations is higher than the interest rate on reserves.[7] The idea is to provide banks with sufficient incentives to smooth liquidity among themselves in the interbank market.

These three central banks aim to ensure that banks themselves demand the amount of central bank reserves they really need and thus the amount needed to maintain a floor system. They use weekly open market operations with primarily one-week maturities to offer fixed-rate lending with full allotment of the desired loan amounts, and against high-quality collateral.

At first glance, it may seem that the differences between the operational frameworks of the various central banks are greater than the similarities. But in fact, there are many similarities between them. For example, if the Riksbank introduces a regular market operation to offer longer-term lending at full allotment, we are effectively implementing monetary policy in the same way as the BoE, but with a higher opportunity cost for reserves. The Riksbank did this during the coronavirus pandemic by offering three- and six-month loans at the policy rate with full allotment and against eligible collateral.

[7] For the ECB, this spread is 15 basis points, and for the RBA 10 basis points. The BoE, on the other hand, applies the same interest rate, the Bank Rate, to both weekly lending and reserves. However, the BoE estimates that the cost of providing collateral in the form of Level A assets (government securities) for credit at the BoE amounts to around 5 basis points, which should help to strengthen the incentives for market-based liquidity management, see Saporta (2025).

The banks need to manage their liquidity more actively

As the amount of central bank liquidity in the Swedish banking system decreases, banks need to adapt their liquidity management so that the liquidity that is already there can be balanced in an efficient manner. It is particularly important that this works well in the future, as central bank liquidity is unevenly distributed within the banking system (see Figures 5 and 6) and the liquidity position of individual banks is affected differently at different stages of the Riksbank's quantitative tightening measures.

At the Riksbank, we have identified a number of factors that the banks need to take into account in particular to avoid disruptions on the overnight market and more volatile market rates in the long run.

1. **Banks need to become more active and improve their operational capacity**

By being more active in trading with other banks on the overnight market and, if necessary, borrowing from the Riksbank, banks can counteract unexpected fluctuations in short-term market rates. This is in the interests of all participants.

There is some activity in the overnight market today (for unsecured loans, see Chart 7), but not all banks are participating. For a long time, some banks have consistently chosen to keep a relatively large amount in central bank reserves, as a liquidity buffer, and place these in the Riksbank's overnight deposit facility. They should instead invest that buffer in Riksbank Certificates and get a higher interest rate. If the banks should one day have a shortage of central bank reserves, they can either use the overnight market or borrow from the Riksbank's lending facility with the certificates or other securities as collateral.

Since 2015, the number of monetary policy counterparties has increased from 15 to 29 banks. The new counterparties are mostly medium-sized or smaller banks and emerged when the banking system had a large structural liquidity surplus and there was little need to balance reserves.

Since 2020, half of our counterparties have never participated in interbank overnight market transactions. In addition, 9 counterparties currently have no collateral with the Riksbank, and 14 counterparties have never borrowed from the Riksbank’s lending facility. These banks need to gain experience in both actively participating in trade with other banks and borrowing from the Riksbank. It may be perceived as convenient to have reserves at the Riksbank, but if an individual bank hoards reserves, it creates problems for the system as a whole, as the central bank's reserves are then not distributed to the banks that need them at the time. This may also ultimately affect the individual bank, as it may create an

imbalance in interest rate setting in short-term fixed income markets. So both the system as a whole and the individual bank benefit from cooperation.

2. Opportunity cost may be increased

Since 2023, banks have been able to invest their entire liquidity surplus in Riksbank Certificates, which are securities issued by the Riksbank with a one-week maturity. Yet the amounts that banks leave as overnight deposits at the Riksbank, with an interest rate 10 basis points below the policy rate, amount to between SEK 50 and 250 billion. The fact that the banks retain a surplus of reserves in this way may be due to the existence of a too low opportunity cost, that is, the cost of 10 basis points that a bank incurs by placing central bank liquidity as reserves compared with placing it in certificates.

This means that the Riksbank may need to raise its lending rate and simultaneously lower its deposit rate, or in other words widen the interest rate corridor. This, in turn, may lead to the banks investing a larger share in certificates, to less reserves remaining in the banking system and to the banks having to use the overnight market to a greater extent.

3. Some banks are reluctant to use the Riksbank's lending facility

There are banks that state that they do not want to use the Riksbank's standing lending facility or to create reserves by selling back certificates to the Riksbank, because they are concerned that other banks will perceive this as a sign of weakness. Thus, it is a question of the stigma I mentioned earlier.

This reluctance to borrow from our facilities has been evident when there has been volatility in the money market, as has sometimes been the case when there has been high demand for Riksbank Certificates, resulting in less central bank reserves in the system on some days. But the facilities are there to make it easier for the banks. Their very purpose is to be utilised so that the banks can lend demanded volumes at attractive rates even in periods of tight liquidity. Banks taking advantage of this business opportunity can make a positive contribution to interest rate formation.[8] The banks should not have any written or unwritten internal rules or behavioural orders stating that they may never "be short" or borrow from the Riksbank.

[8] This is a theme addressed by the BoE in Green (2025)

Concluding thoughts

Let me summarise our most important message. As the Riksbank continues to reduce its holdings of Swedish securities, the banking system's liquidity surplus in Swedish kronor towards the Riksbank is declining. The banks therefore need to prepare for the fact that there will be significantly less central bank liquidity available in the banking system.

In such an environment, it will become more common for some banks to have a reserve shortfall on some days while others have a surplus. In future, the banks will need to be able to equalise this difference between themselves. This will place greater demands on the banks' ability and willingness to be active on the overnight market in relation to other banks, and to both borrow and invest in the Riksbank if necessary.

My message to you, our monetary policy counterparties, is to review your operational capacity now, to be active and to borrow and lend reserves among yourselves. In this way, you will be prepared when the liquidity surplus in the banking system continues to decrease. You should therefore endeavour to balance your reserves among yourselves, but it is also essential that, both for your own needs and to help support the market, you should be able to use our lending facility to access reserves without hindrance. It is natural to borrow from the Riksbank to cover temporary liquidity shortages. This is how the operational framework is supposed to function.

As I mentioned initially, the Riksbank continuously reviews the functioning of the operational framework and whether there is room for improvement. At this stage, we are considering making changes in three areas. If we decide to proceed with one or more of these points, we will first send the proposal out for consultation to the relevant market participants.

First, we are considering widening the interest rate corridor between our standing deposit facility and the marginal lending facility to strengthen the incentives for banks to borrow from one another in the overnight market.

Second, we are considering lowering the interest rate on the Supplementary Liquidity Facility to make it slightly cheaper to borrow from the Riksbank against other eligible collateral such as covered bonds and municipal securities. This would better reflect the long-term normal price differential in the market between loans against government securities and loans collateralised by these other securities.

Third, we are considering introducing mandatory test transactions, where our monetary policy counterparties pledge collateral to borrow from the Riksbank at

longer maturities. If we do this, it is to ensure that the banks can borrow quickly and efficiently from the Riksbank if necessary.

The functioning of our operational framework is of course central to the Riksbank. If our counterparties are operationally prepared and active in the overnight market, this benefits both monetary policy and financial stability. But these issues are not only in our interest. It is also positive for the banks to have more opportunities to manage their liquidity at favourable interest rates.

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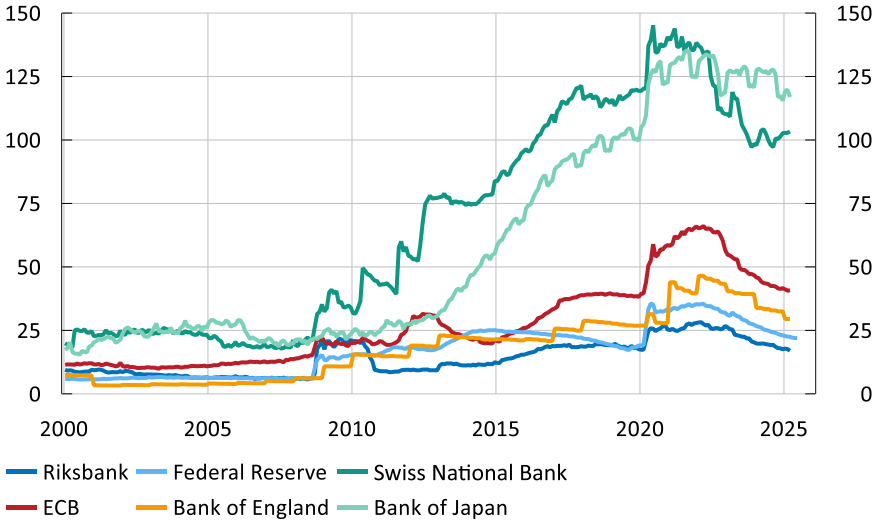
On the Optimal Supply of Reserves - FEDERAL RESERVE BANK of NEW YORK

Figures and tables

Figure 1. Central banks normalise their balance sheets

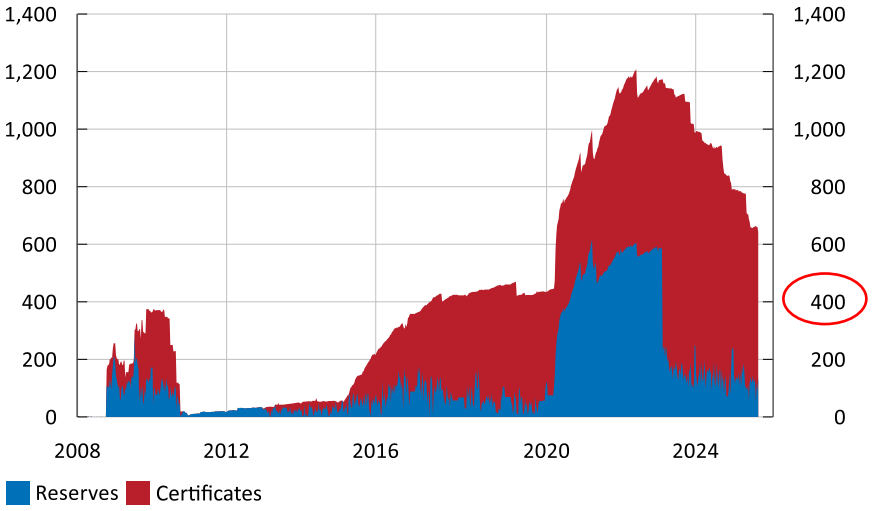
Central banks' balance sheet totals as a share of GDP



Source: The central banks and national statistics authorities.

Figure 2. The banking system's liquidity surplus is also declining and is expected to be around 400 billion by 2030

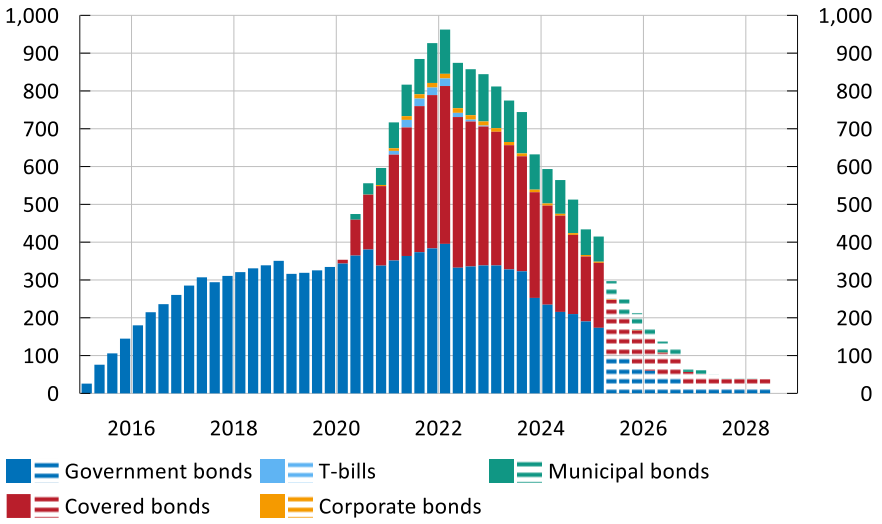
Billion SEK



Note. The increase in reserves between October 2019 and February 2023 was due to the Riksbank limiting the allocation of Riksbank Certificates to varying degrees.
Source: The Riksbank.

Figure 3. The Riksbank's securities holdings in kronor is decreasing

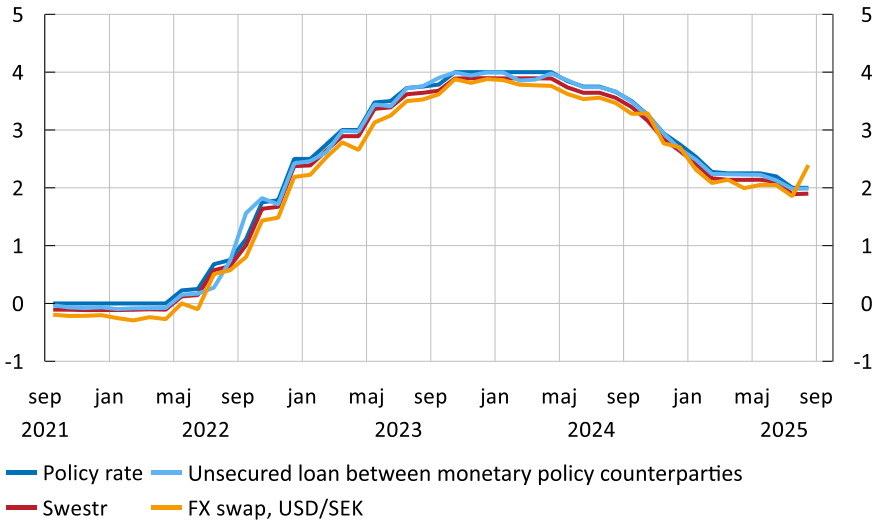
Billion SEK



Note. Nominal amounts, SEK billion. The dashed bars are a projection of the Riksbank's securities holdings based on an assumption that sales of nominal government bonds will continue until the end of December 2025 and then cease, and on a technical assumption regarding the sale of various issues of nominal government bonds. These assumptions may be adjusted to some extent in 2025. The series in the figure end in the second quarter of 2028, which is the last quarter of the Riksbank's three-year forecast horizon.
Source: The Riksbank.

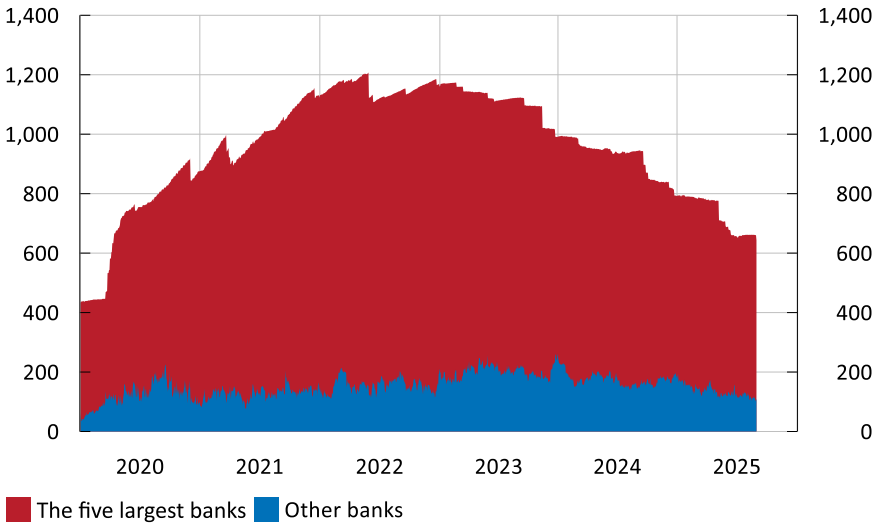
Figure 4. Overnight rates track the Riksbank's policy rate well

Per cent



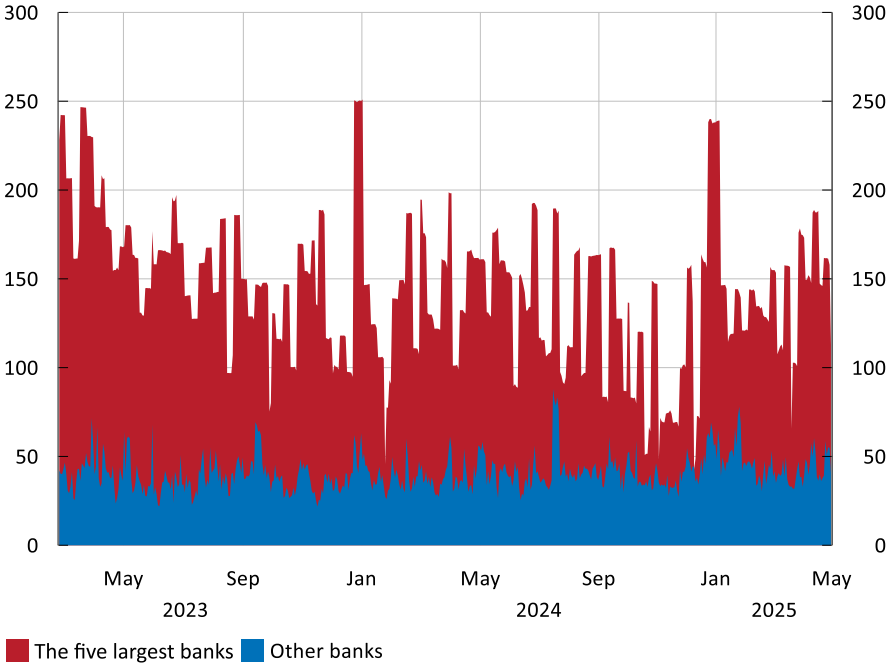
Note: Refers to transactions with maturity overnight. Volume weighted interest rates, calculated as a monthly average. Transactions on the last day of the year is excluded due to year-end effects.
Source: The Riksbank.

Figure 5. The amount of central bank liquidity decreases proportionally more among the five largest banks and is broadly unchanged among other banks
Billion SEK



Note. The banking system's liquidity surplus vis-à-vis the Riksbank is the sum of reserves and certificates. The five largest banks are also the five largest monetary policy counterparties.
Source: The Riksbank.

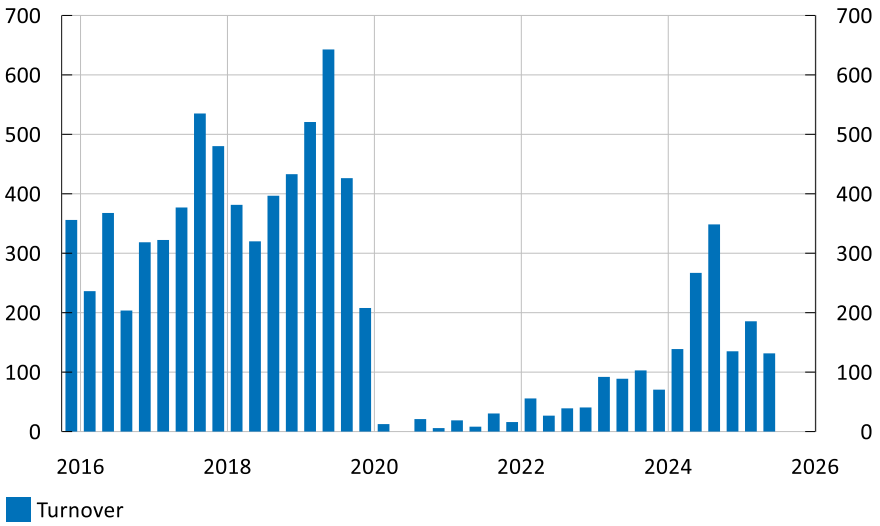
Figure 6. The amount of central bank reserves placed overnight in the Riksbank's deposit facility varies widely across banks
Billion SEK



Source: The Riksbank.

Figure 7. Tentative signs that the interbank market is recovering

Billion SEK



Note: Refers to unsecured loans overnight between monetary policy counterparties and the turnover is per quarter.
Source: The Riksbank.

Table 1. Different frameworks and how they relate to different amount of reserves

Framework	Corridor system		Floor system	
State	Normal	QE	Normal	QE
Amount of reserves	Scarce to Ample	Scarce to Abundant	Ample	Abundant