

Monetary policy is reflected in the Riksbank's balance sheet. This was made particularly clear during the financial crisis, when the balance sheet total more than tripled. Independent of the financial crisis, important structural changes have taken place, leading to the banking system moving from having a structural deficit as regards the Riksbank towards having a surplus. This means that the Riksbank will continue to offer the banks the opportunity to deposit their surplus liquidity in Riksbank certificates, as opposed to offering the banks funding in the form of weekly repo transactions, as was the case before the crisis.

The framework for the implementation of monetary policy, the Riksbank's balance sheet and the financial crisis

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Six times every year, the Riksbank's Executive Board convenes to take a decision on the repo rate. Strictly speaking, the repo rate is the interest rate charged to the deposits and loans with maturities of one week made by the Riksbank each Tuesday.¹ The repo rate is also a signal from the Riksbank to the financial markets indicating what it would like the shortest interest rate, that for overnight loans, to be. The instruments the Riksbank can use to lend credibility to this signal and to guide the overnight rate with more precision are primarily various types of deposits and lending, of various maturities and subject to various interest rate terms. The aim of this Economic Commentary is to explain how this framework for implementing monetary policy (the operational framework) works and how it is connected to the Riksbank's balance sheet. In particular, we discuss developments during the financial crisis. We also explain why monetary policy repo transactions have now been replaced by Riksbank certificates.

The majority of the instruments used by the Riksbank to control the interest rate can be found as items on the Riksbank's balance sheet. Before the financial crisis, transactions in these various instruments were usually comparatively small. This means that, the measures adopted under the framework for implementing monetary policy typically had little effect on the balance sheet. This changed during the financial crisis. The loans offered by the Riksbank to the banks during the period October 2008 – October 2009 led the Riksbank's balance sheet to more than triple. The increased liquidity in the payment system resulting from these loans was deposited again at the Riksbank. This could be seen on the liability side of the balance sheet through the increase of items representing various instruments for implementing monetary policy. To explain this in more detail, we can start with a short review of the payment system, before examining the operational framework and the manner in which monetary policy transactions affect the Riksbank's balance sheet.²

How does the Riksbank control the interest rate?

The existence of a connection between the operational framework and the central bank's balance sheet may be less than surprising. According to the classic textbook model, central banks control the interest rate by adjusting the money supply through the sale and purchase of securities – that is, through open market operations. The more securities the central bank buys, the lower the interest rate becomes. There is thus a direct correspondence between the central bank's control of the interest rate and fluctuations in the size of the central bank's balance sheet. However, this simple model is too simple when it comes to understanding modern operational frameworks.³ There is no direct connection between interest rate changes and the size of

1. The term 'repo rate' refers to the interest rate on a repurchase agreement.

2. Previous accounts of the Riksbank's operational framework do not address the connection with the balance sheet. For example, see Mitlid and Vesterlund (2001).

3. This is, however, a mechanism that is used to explain the effects of the large purchases of assets carried out by the world's major central banks in recent years.

the balance sheet in the interest rate management systems currently used by most central banks. Instead, it is the central bank's monopoly on providing means of payment (and, above all, its right to determine under which conditions these means of payment are made available) which makes it possible for the central bank to control the interest rate.⁴ This is what is usually called the central bank's operational framework.

Therefore, to show how the Riksbank controls the interest rate, we can start by providing a brief background description of the payment system and of how payments between (private or legal) entities give rise to payments between banks. Such payments lead to surpluses in certain banks, while others see deficits arise in their accounts in the payment system. We will describe how these accounts are evened out via loans between banks or via transactions with the Riksbank.

Free-of-charge payments between the banks during the day...

If two entities have accounts in the same bank, a payment between them may be effected simply by the bank debiting the account of one of them and crediting the account of the other. However, if these entities have accounts with different banks, a payment must be made between these banks. Such transactions between banks are usually made through debiting and crediting of the banks' accounts in the Riksbank's payment system, RIX.⁵ In recent years, transfers between customers of different banks have led to daily transactions in RIX averaging about SEK 570 billion – that is, almost one-fifth of Sweden's (annual) GDP. This means that RIX is dealing with very large amounts.

Occasionally, a bank may be forced to pay out money to another bank during the day, before it has received any money itself. In such a case, it may borrow from the Riksbank to be able to effect this payment. It will then receive what is known as an intraday credit from the Riksbank, against collateral in the form of securities or foreign currency. Intraday credits are necessary for the payment system to function effectively. If every bank were to sit and wait for payments before making any payments itself, the payment system would not work. Just like most other central banks, the Riksbank require eligible collateral for intraday credits, but does not change any additional payments.

... and for interest at the end of the day

At the end of the day, certain banks will have deficits in their RIX accounts, while others will have surpluses. The banks with surpluses may then either lend money "overnight" to those with deficits on what is called the overnight market, or deposit the surplus with the Riksbank. On the other hand, those banks with deficits must either borrow from other banks or borrow from the Riksbank (against collateral). Overnight loans between banks are made at an interest rate known as the overnight rate. It is this interest rate that the Riksbank is able to control at first hand. This takes place, first and foremost, within the framework of the *standing facilities*.

These standing facilities mean that the Riksbank provides the possibility of depositing money overnight at a *deposit rate* equal to the repo rate minus 0.75 percentage points and the possibility of borrowing money at a *lending rate* equal to the repo rate plus 0.75 percentage points.⁶ Banks participating in RIX that have entered agreements with the Riksbank to act as what are known as monetary policy counterparties may take advantage of this opportunity.⁷

If banks with surplus liquidity are doubtful about lending to other banks, the overnight rate will probably rise, as the banks that are short of liquidity will bid against each other for loans and thus increase the rate. However, those banks that are mo-

4. See, for example, Disyatat (2008), Borio and Disyatat (2009), as well as Keister, Martin and McAndrews (2008).

5. The members of RIX are the Riksbank, the Swedish National Debt Office and a number of credit institutions and clearing organisations. Settlement in RIX takes place under the principle of real-time gross settlement. This means that payments are settled one at a time and that the funds transferred to a RIX account become immediately accessible in the account and can be used for other payments.

6. Under the prevailing repo rate of 1.25 per cent (as of December 2010), the deposit rate is thus 0.50 per cent, while the lending rate is 2.00 per cent. Between April 2009 and July 2010, when the repo rate was at a historically low level, the lending and deposit rates were equal to the repo rate plus/minus 0.50 percentage points.

7. The Riksbank's website includes a list of monetary policy counterparties. See <http://www.riksbank.se/templates/Page.aspx?id=26467>.

netary policy counterparties to the Riksbank can instead apply to the Riksbank to get overnight credit. The Riksbank's lending rate thus sets a ceiling for the overnight rate. In the same way, the deposit rate sets a floor. The Riksbank's deposit and lending rates thereby constitute an interest rate corridor within which the overnight rate is determined.⁸

The Riksbank controls the overnight rate...

The more exact positioning of the overnight rate within the interest rate corridor is, however, a matter for negotiation between the banks on the overnight market. The corridor width of 1.5 percentage points makes it possible for the interest rate to vary widely from one day to another, depending on the end result of the banks' negotiations. A narrower corridor would limit variations in the interest rate, but would also reduce the banks' incentive to even out their liquidity positions with each other. To encourage the banks to agree on overnight rates close to the repo rate, the Riksbank stands ready to conduct fine-tuning operations every afternoon. In these operations, the Riksbank offers credit against collateral or overnight deposits at an interest rate equal to the repo rate plus/minus 0.10 percentage points respectively. The aim of fine-tuning is to balance the banking system's liquidity position towards the Riksbank by lending out funds so that the banking system can cover its deficit or deposit a surplus. The size of the amount lent or received by the Riksbank thus depends on the banking system's position towards the Riksbank at that point in time. If the banking system as a whole has a borrowing requirement, the Riksbank lends funds, albeit not in an amount exceeding the banking system's total borrowing requirement. A similar rule applies if the banking system as a whole has a deposit requirement. In this case, the Riksbank receives funds, but not in an amount exceeding the banking system's deposit requirement. The reason for this is that the Riksbank wants the banks, at first hand, to even out their liquidity positions among themselves, and only to approach the Riksbank when all other possibilities have been exhausted.⁹

...and liquidity in RIX

Under normal circumstances, the Riksbank tries to supply or withdraw the exact amount of liquidity needed for the total balances of the banks' accounts at the Riksbank to amount to zero at the end of the day. This means that, if a number of banks have deficits on their accounts at the end of the day, other banks will have an equivalent surplus.

How does this liquidity management in RIX take place? Before 2008, there existed what is known as a structural deficit in the payment system – that is, the banking system would have had a deficit in kronor if the Riksbank had not supplied liquidity every week. So the Riksbank provided the banks with a means of payment by buying securities from them, at the same time as it was agreed that the banks would buy the securities back at a later date. These so-called repo transactions usually had a maturity of one week, and the price corresponded to the repo rate prevailing at the time. When a bank sells a security to the Riksbank, an amount equivalent to the purchase price is transferred to its account at the Riksbank. The bank can then use these funds in its account to pay other members of the payment system or to order banknotes and coins from the Riksbank. In the summer of 2008, the Riksbank sold foreign currency against payment in kronor so that the banking system would continue to have a structural deficit and it would be possible to continue making repo transactions. Over the last year, the banking system has instead had a structural surplus towards the Riksbank. To draw in this surplus liquidity in the payment system, once per week the Riksbank issues short-term certificates (known as Riksbank certificates), in which the banks can

8. Under normal circumstances, the Riksbank adjusts the level of liquidity so that the banking system should not need to use its deposit and lending facilities. Consequently, only very small amounts are usually reported under the Riksbank's balance sheet items deposit facility and lending facility. Paradoxically, it is thus the most insignificant balance sheet items that are most significant when the overnight rate is determined, as they set limits for fluctuations in the interest rate.

9. Daily fine-tuning operations aimed at stabilising the overnight rate were introduced in 1995. This was due to the experiences the Riksbank had when allowing the overnight rate to freely fluctuate within the interest rate corridor. On average, the overnight rate did not correspond with the repo rate, but instead fluctuated asymmetrically within the corridor. This led to the fluctuations of the overnight rate occasionally being interpreted by market players as policy signals. To avoid this, fine-tuning was introduced as a way of stabilising the overnight rate on the same level as the repo rate (see Holmberg (1996).

deposit their liquidity for a return corresponding to the repo rate.¹⁰ Repo transactions and Riksbank certificates are examples of *open market operations*.

The operational framework – a summary

All in all, the system we have described here is aimed at strongly encouraging the banks to manage their liquidity themselves, at the same time as the Riksbank creates conditions for the stable development of the overnight rate. The large difference between the Riksbank's deposit and lending rates in the standing facilities means that the banks primarily turn to one another to even out their daily liquidity positions. However, the large differences between interest rates mean that the variations in the overnight rate can be great. This is where the daily fine-tuning operations come in. The banks know that the payment system will largely be in balance at the end of the day – that is, that the total lending requirement of those banks with deficits will be equal in size to the total investment requirement of the other banks in the system. Consequently, should a bank need to borrow overnight, it will know that the money will be there among the other banks. As a bank may need to lend money one day and borrow money the next day, the interest rate is not usually negotiated. Instead, the transaction is conducted using the repo rate or an interest rate very close to the repo rate. According to the banks themselves, the knowledge that the system will largely be in balance at the end of each day contributes to this pricing practice. Finally, the reason that fine-tuning is conducted at a somewhat less advantageous interest rate than the repo rate is to encourage the counterparties to bid in the weekly repo transaction or issue of Riksbank certificates. Figure 1 summarises the operational framework.

Monetary policy is reflected in the Riksbank's balance sheet

The different types of deposit and lending that the Riksbank undertakes to control the interest rate give rise to changes in various balance sheet items. If we wish to examine this in more detail, it would be suitable to use a somewhat simplified version of the Riksbank's balance sheet.¹¹ Table 1 shows balance sheets at three points in time, 23 August 2008 (i.e. just over one month before the Riksbank started extraordinary loans during the financial crisis), 23 November 2009 (at the culmination of the Riksbank's crisis measures) and, finally, 15 January 2011 (when the Riksbank's crisis measures were phased out).¹²

10. Riksbank certificates thus typically have maturities of one week. However, there are exceptions. Around Christmas and New Year, maturities can be as long as three weeks, depending on how the holidays fall that year. During the spring of 2010, the Riksbank also started issuing Riksbank certificates with longer maturities, although never longer than the time until the next monetary policy meeting.

11. The Riksbank publishes information on its balance sheet four times per month on its website – see www.riksbank.se/veckorapport. This provides more detailed information than Table 1.

12. At its peak during the autumn and winter of 2009/10, the Riksbank lent SEK 375 billion. In addition, between October 2008 and November 2009, the Riksbank lent US dollars. At its peak in the spring of 2009, this lending amounted to USD 30 billion.

Table 1. The Riksbank's balance sheets, 23 August 2008, 23 November 2009 and 15 January 2011, SEK million

Assets	Aug 2008	Nov 2009	Jan 2011
Gold and foreign exchange reserve	196 067	325 030	322 556
Marginal lending facility	–	–	1
Market operations			
Fine-tuning	–	–	–
Repurchase transactions	3 501	–	–
Lending at longer maturities in SEK	–	375 301	–
Lending at longer maturities in foreign currencies	–	334	–
Other assets	3 731	7 210	4 203
Total assets	203 299	707 875	326 760
Liabilities			
Banknotes and coins	106 612	105 928	101 622
Deposit facility	376	19	63
Market operations			
Fine-tuning	77	128 308	8 309
Riksbank certificates	–	246 188	–
Other liabilities	37 492	163 407	144 337
Equity	58 742	64 025	72 429
Total liabilities	203 299	707 875	326 760

Source: Sveriges Riksbank

On the asset side, the gold and foreign exchange reserve is usually the single largest item, but, as the table shows, this is not always the case. In November 2009, lending in Swedish kronor at longer maturities (i.e. longer than the normal weekly repo transaction) was the largest item. We will return to this below. Other items on the asset side include lending within the framework of the standing facilities, and various types of open market operations, such as lending in the form of the weekly repo transactions described above.

On the liability side, banknotes and coins usually form the single largest item.¹³ Deposits within the framework of the standing facilities and open market operations (such as issues of Riksbank certificates or the daily fine-tuning operations) can also be found on the liability side.¹⁴

Before 2008, the banking system had a deficit in relation to the Riksbank. The Riksbank covered this deficit with repo transactions once per week – that is, with one-week loans against collateral. The amounts involved were typically small, SEK 1–3 billion (see Table 1). Since 2001, when the Riksbank divested its portfolio of Swedish securities, almost all of the Riksbank's income has been in foreign currency, while almost all of its costs are in Swedish kronor. Consequently, the banking system's deficit towards the Riksbank has shown a decreasing trend, meaning that the repo transactions have decreased since 2001. Instead, as of February 2010, a structural surplus has prevailed in the payment system, which the Riksbank manages partly through the weekly issue of Riksbank certificates, and partly through daily fine-tuning operations. Even though the banking system had a structural deficit until February 2010, the Riksbank found itself forced to manage a surplus of liquidity in the banking system caused by the lending at longer maturities introduced in October 2008. However, this should not be considered a structural surplus, as the intention was to phase out the loan programme when the crisis was over – which was what happened.

13. The amount of the item banknotes and coins is determined by demand among the general public for money, which remains relatively unchanged over time.

14. Among Other liabilities, "Liabilities to residents in Sweden denominated in foreign currency" is currently a large item. This mainly consists of borrowing in foreign currency via the Swedish National Debt Office to strengthen the foreign exchange reserve.

What determines the structural position?

As we have previously observed, since February 2010, the banking system has had a structural surplus towards the Riksbank. So what is it that determines whether the banking system has a structural deficit or surplus towards the Riksbank? This is determined by the net of all assets and liabilities on the Riksbank's balance sheet, apart from the items representing monetary policy transactions, primarily repo transactions, fine-tuning operations and Riksbank certificates, as well as any amounts in the standing facilities. We can use the balance sheets in Table 1 to illustrate this. In August 2008, this net amount meant a deficit corresponding to the repo transactions less fine-tuning operations and the deposit facility, all in all just over SEK 3 billion. In January 2011, on the other hand, this net amount corresponded to a surplus equivalent to the total of Riksbank certificates, fine-tuning operations and the deposit facility, all in all about SEK 8.4 billion. In November 2009, there was also extensive lending in Swedish kronor at longer maturities. Even if this created a large liquidity surplus in the banking system, this is not the same as a structural surplus in that it was not a permanent injection of liquidity. The banks' structural position in November 2009 was thus the sum of the Riksbank certificates, the fine-tuning operations and the deposit facility, minus lending at longer maturities, which gave a structural deficit of almost SEK 0.8 billion.

What causes changes in the structural position? If items on the asset side other than the monetary policy transactions increase (e.g. through purchases of foreign or domestic assets with payment in kronor), the banking system will find itself with a greater surplus or smaller deficit vis-à-vis the Riksbank. And, if items on the liability side other than the monetary policy transactions increase, the banking system will find itself with a greater deficit or smaller surplus. In recent years, demand among the general public for banknotes and coins has decreased, which tends to increase the structural surplus. At the same time, the Riksbank's annual payments of profits to the Treasury have been of great significance to the banking system's structural position towards the Riksbank. Each year, a portion of the Riksbank's unappropriated earnings are paid in to the Swedish National Debt Office, instead of being added to the Riksbank's equity. The Swedish National Debt Office deposits these funds in an account in a commercial bank, which, in turn, deposits this increased liquidity in the Riksbank. In recent years, the amount of these transfers has averaged just below SEK 5 billion, thereby contributing towards the banking system shifting from having had a structural borrowing requirement with the Riksbank a few years ago to having a structural deposit requirement going forward.

Liquidity management in practice

As there is a structural liquidity surplus, the Riksbank must drain the banking system of liquidity. The Riksbank does this by issuing Riksbank certificates and through fine-tuning operations. The Riksbank makes a forecast of the banking system's deposit requirement in the week ahead to determine how many certificates should be issued. In practice, this is a matter of forecasting the Riksbank's net payments in kronor, which can be identified through the most important changes in the relevant items in the Riksbank's balance sheet during the week. In this context, the item Banknotes and coins in circulation is of the greatest significance. This is controlled by the general public's demand for means of payment, which follows a clear seasonal pattern. If demand is expected to increase among the general public, which it does particularly strongly ahead of Christmas shopping and other major public holidays, the banks will need to order more banknotes and coins. They pay for these by having the corresponding amounts deducted from their accounts in RIX. The banks will thus have smaller sums in their accounts, with the banking system's **deposit requirement thereby decreasing**. Consequently, the Riksbank will issue fewer Riksbank certificates than it did in the preceding week.¹⁵

15. In this context, it could be expected that changes in the foreign exchange reserve would affect the banking system's deposit requirement. However, this is not always the case. The reason for this is that the Riksbank, as a rule, does not carry out any significant foreign exchange transactions against Swedish krona. In addition, all of the changes in the foreign exchange reserve arising as a result of fluctuations in value are matched on the liability side by fluctuations in the item Revaluation account, which we have included in the item Other liabilities in Table 1.

Changes in liquidity management during the financial crisis

In October 2008, the international wave of financial unease hit the Swedish financial markets in earnest. The markets for long-term loans ceased to function in principle, which also affected Swedish banks. The Riksbank then started lending US dollars and Swedish kronor to the banks.¹⁶ During the autumn of 2008 and the spring of 2009, Swedish kronor lending was conducted with maturities of 3, 6 and eventually 12 months, and at an interest rate above the market rate. After this, when the repo rate had reached its lower limit, the banks were also given three separate opportunities to obtain 12 month loans at low interest rates. This happened in conjunction with the monetary policy meetings in July, September and October 2009, with the intention being to bring down interest rates for companies and households.

This lending meant that, in one stroke, the banking system went from the previous situation with a short-term funding requirement in the Riksbank – which was provided by comparatively small weekly repo transactions – to having a very large short-term deposit requirement. The Riksbank's lending to the banks can be seen on the asset side of the balance sheet in Table 1 – on 23 November 2009, it amounted to SEK 375.3 billion. This lending led to a very large liquidity surplus in the payment system, which the Riksbank drew in via weekly issues of Riksbank certificates and daily fine-tuning operations. On 23 November, these amounted to SEK 246.2 billion and SEK 128.3 billion respectively.

A large proportion of the surplus liquidity was thus handled via the daily fine-tuning operations. Even though it would be more advantageous to deposit this money in certificates at an interest rate equivalent to the repo rate than to deposit it in fine-tuning operations at an interest rate equivalent to the repo rate minus 0.10 percentage points, the banks have largely chosen to deposit the money in fine-tuning operations. This behavioural pattern was established during the financial crisis and indicates that, in times of crisis, banks are prepared to pay to maintain liquidity. This behaviour pattern has thus remained even though circumstances on the financial markets are now more normal.

The Riksbank supported the banks' lending activities during the crisis

The fact that the Riksbank's extraordinary lending automatically gave rise to increased deposits in the Riksbank (as shown by Table 1 above) may be difficult to understand. It may be natural to ask "What's the point of the Riksbank lending to the banks if they will immediately deposit the money?" A simple example in Table 2 below demonstrates how this can happen and how the increased loans from the Riksbank contributed towards holding up lending from the banks to the general public.

Table 2. Example of lending from the Riksbank to the banks

Balance sheets before the Riksbank's lending:				Balance sheets after the Riksbank's lending:			
Bank A				Bank A			
Lending	100	Deposits	50	Lending	100	Deposits	50
		Loan from B	50			Loan from Rb	50
Bank B				Bank B			
Lending	50	Deposits	100	Deposits	50	Deposits	100
Loan to A	50			Rb certificat	50		
The Riksbank							
Lending	50	Rb certificat	50				

Imagine that there are two commercial banks, A and B, which fund their lending through deposits from the general public (Bank B), but also from other banks (Bank A, which borrows from Bank B). Both banks lend equal amounts. Imagine now that a serious crisis of confidence arises, with the result that Bank B stops lending to Bank A. Instead, Bank B deposits its money in Riksbank certificates. So, instead, the Riksbank

16. See Sellin (2009).

lends the same amount to Bank A. Without this loan, Bank A would have been forced to reduce its lending or to find alternative funding, which would have been difficult. Of course, this example is a gross simplification, but an important point of the example is that the Riksbank's lending activities are beneficial even though the money lent returns to the Riksbank in the form of deposits in Riksbank certificates.

The example also demonstrates that, when it lent to the banks, what the Riksbank was doing was taking on part of the credit risk, a credit risk that the banks were no longer willing to take. However, the Riksbank's lending always took place against collateral and with broad interest rate margins. The pricing of the loans meant that the interest the Riksbank received from this lending exceeded the interest that it simultaneously paid for Riksbank certificates or fine-tuning. All in all, this has resulted in the Riksbank earning almost SEK 2.6 billion from extraordinary lending in Swedish kronor during the financial crisis.¹⁷

The balance sheet and the Riksbank's implementation of monetary policy in a longer perspective

Figures 2 and 3 show how the Riksbank's balance sheet has developed since 1999, with the main assets in Figure 2 and liability items in Figure 3. Until the autumn of 2008, the balance sheet total was about SEK 200 billion, but this increased dramatically during the crisis to peak at SEK 763 billion in July 2009. The reason for this can be found in the loans in US dollars and Swedish kronor that the Riksbank started to offer Swedish banks in October 2008.¹⁸

One major change in the Riksbank's balance sheet compared with ten years ago is that holdings of securities denominated in domestic currency no longer exist. Until June 2001, the Riksbank held a portfolio of Swedish treasury bills and government bonds. In principle, the Riksbank can buy or sell securities in the market in order to affect the financial system's structural (more permanent) borrowing or deposit requirement vis-à-vis the Riksbank. However, the Riksbank has not made use of market operations of this kind in recent years, even if this measure was considered during the spring of 2009 when the repo rate had reached its lower limit and further monetary policy stimulation was needed.¹⁹

Another item on the asset side that has decreased during the period, before finally disappearing completely, is that of repo transactions. We have previously described how these were used to supply liquidity to the banking system. As mentioned above, the steady decrease of repo transactions from 2001 to 2008 was primarily due to the annual payments of profits to the government. Unless something is done to change the situation, we should thus expect to see a continuation of this trend towards a smaller funding requirement among the banks, or an increased deposit requirement as it is now.

One final observation on the asset side is that the foreign exchange reserve increased significantly during 2009, when the Riksbank borrowed an amount equivalent to SEK 100 billion from the Swedish National Debt Office to strengthen the Riksbank's foreign exchange reserve. As the Swedish banks fund a significant part of their lending activities in foreign currency, the Riksbank needs to have a sufficiently large foreign exchange reserve to be able to meet a potential need from the banks.

Turning to the liability side, we can see that this mainly consists of the items Banknotes and coins, Equity, and Other liabilities. Banknotes and coins in circulation amount to slightly more than SEK 100 billion and thus form about half of the balance sheet

17. Lending in US dollars did not provide such a large interest-rate margin, in that a large part of this came from the US central bank, the Federal Reserve. In accordance with the swap agreement the Riksbank entered with the Federal Reserve, all interest received by the Riksbank from Swedish banks went, in full, to the Federal Reserve (see also the Fed's website). Thus the Riksbank broke even on the lending in US dollars that was funded by the Federal Reserve. The Riksbank also lent US dollars from the foreign exchange reserve. The revenue from this lending in US dollars was SEK 225 million.

18. The major increase of the balance sheet during the financial crisis was one of the world's largest. Measured as a proportion of GDP, the Riksbank's balance sheet increased from about 7 per cent before the crisis to peak at 25 per cent. The corresponding figures for the US central bank are 7 and 15 per cent of GDP respectively. See *Financial Stability Report 2010:2*.

19. See Monetary Policy Update, April 2009.

total. As can be seen, this item has been very stable over time. We can also note that deposits in the form of fine-tuning and Riksbank certificates were significant during the financial crisis.

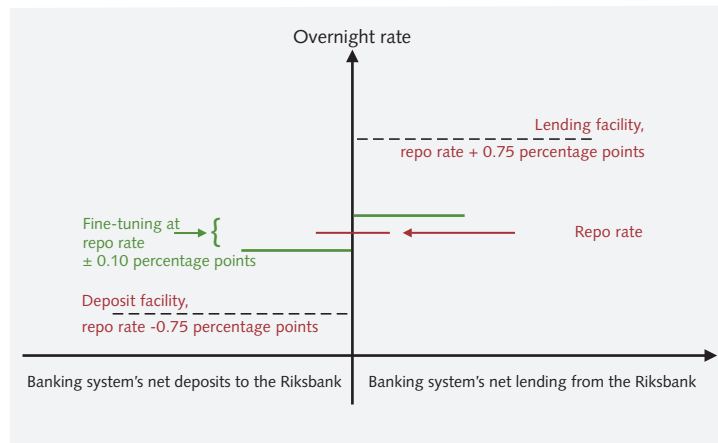
The banking system has gone from a deficit to a surplus

The Riksbank's operational framework is constructed so that, in normal times, transactions connected with the implementation of monetary policy have a very small effect on the Riksbank's balance sheet. Until the summer of 2008, transactions motivated by monetary policy only amounted to a few billion kronor per week. The extraordinary lending during the financial crisis led these to increase to several hundred billion kronor per day. Now that all the loans granted during the financial crisis have matured, the liquidity surplus that the Riksbank has to manage amounts to just over SEK 9 billion. Depending on how the transfer of the Riksbank's profits to the Treasury is handled, this liquidity surplus may increase further over the next six months. Compared with most other central banks (such as the ECB), the Riksbank thus has an operational framework entailing comparatively few and small transactions.²⁰

After more than a decade in which the banks have had a structural deficit towards the Riksbank, there is now a structural surplus. Consequently, the Riksbank will not return to the system of weekly repo transactions. Instead, the routine will involve issues of Riksbank certificates every Tuesday, complemented with daily fine-tuning operations as needed. This means that, in future, the Riksbank will pay, instead of receive, interest on monetary policy transactions. This has no significance for its ability to control the interest rate, but it will affect the Riksbank's balance sheet. Among other consequences, with all other factors being equal, this will reduce earnings and transfers to the Treasury in the years ahead.

Figures

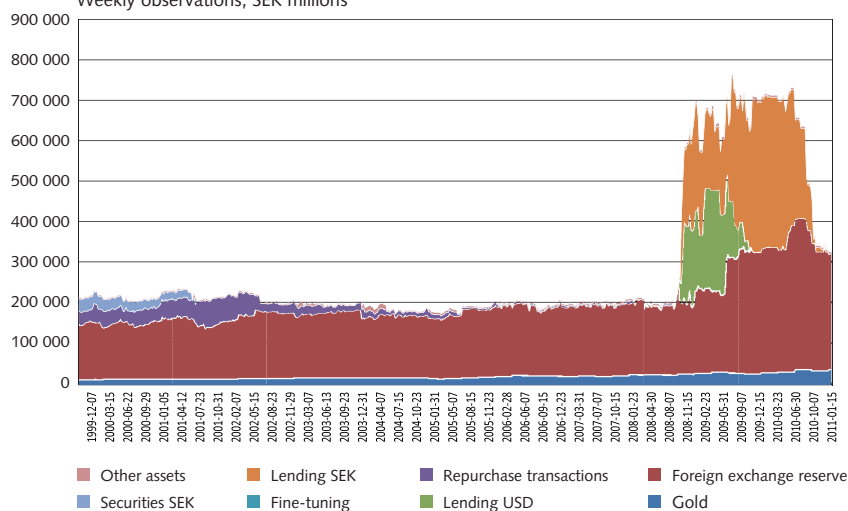
Figure 1. The Riksbank's operational framework for the overnight market



20. Transactions motivated by monetary policy are also minor in relation to the average daily amount of transactions in RIX, about SEK 570 billion.

Figure 2. Development of the Riksbank's assets week 39 1999 – week 2 2011

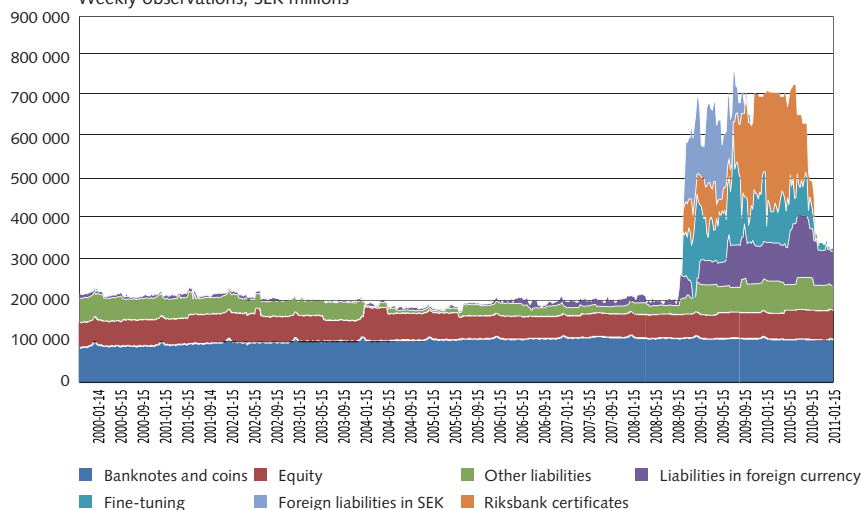
Weekly observations, SEK millions



Source: Sveriges Riksbank.

Figure 3. Development of the Riksbank's liabilities week 39 1999 – week 2 2011

Weekly observations, SEK millions



Source: Sveriges Riksbank.

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